

JANUARY 1993

Transitway & High-Occupancy Vehicle Network Master Plan

APPENDIX

*A PLAN
TO
INCREASE
COUNTY-WIDE
AND
REGIONAL
MOBILITY*



**ISSUES
REPORT**

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PLANNING DEPARTMENT**

ABSTRACT

TITLE: Issues Report Appendix of the Transitway and High-Occupancy Vehicle Network Master Plan

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ABSTRACT: This publication contains the Appendix for the Issues Report of the Transitway and High-Occupancy Vehicle Network Master Plan. The Appendix contains four supporting documents: 1) Draft Glossary of Terms Related to the Transitway and High-Occupancy Vehicle Network Master Plan, 2) Master Plan Transit Recommendations, 3) Planning Background Summaries, and 4) Description of the Background Transportation System.

APPENDIX

*Transitway
and
High-Occupancy
Vehicle
Network
Master
Plan
Issues
Report*



Montgomery County Planning Department

THE
MARYLAND-NATIONAL
CAPITAL PARK AND
PLANNING COMMISSION

8787 Georgia Avenue / Silver Sprng. Maryland / 20910-3760

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

The Maryland-National Capital Park and Planning Commission is a bi-county agency created by the General Assembly of Maryland in 1927. The Commission's geographic authority extends to the great majority of Montgomery and Prince George's Counties; the Maryland-Washington Regional District (M-NCPPC planning jurisdiction) comprises 1,001 square miles, while the Metropolitan District (parts) comprises 919 square miles, in the two Counties.

The Commission has three major functions:

1. The preparation, adoption, and, from time to time, amendment or extension of the *General Plan* for the physical development of the Maryland-Washington Regional District;
2. The acquisition, development, operation, and maintenance of a public park system; and
3. In Prince George's County only, the operation of the entire County public recreation program.

The Commission operates in each county through a Planning Board appointed by and responsible to the County Government. All local plans, recommendations on zoning amendments, administration of subdivision regulations, and general administration of parks are responsibilities of the Planning Boards.

NOTICE TO READERS

A functional master plan, following approval by the County Council and adoption by The Maryland-National Capital Park and Planning Commission, constitutes an amendment to the General Plan for Montgomery County. As such, it provides a set of comprehensive recommendations and guidelines for the use of publicly and privately owned land within its planning area.

County-wide functional master plans are intended to provide a benchmark point of reference with regard to public policy for a specific system. These plans cover such functions as overall circulation systems, parks and recreation facilities, environmental systems, agricultural preservation and such public services as fire and police stations and libraries. A functional master plan reflects a vision of future development for these systems that is balanced with the principal development objectives of the entire County.

Together with relevant master plans, a functional master plan should be referred to by public officials and private individuals when decisions are made that affect the facilities within the plan. It should be noted that functional master plan recommendations and guidelines are not intended to be specifically binding on subsequent actions, except in certain instances where documents such as the Zoning Ordinance or Subdivision Regulations require a specific condition to exist.

Functional master plans generally look ahead to a time horizon when the adopted area master plans will be fully developed. It is recognized that the original circumstances at the time of adoption of a functional master plan will change, and that the specifics of a plan may be viewed differently as time goes on.

Any sketches in an adopted functional master plan are for illustrative purposes only, and are intended to convey a general sense of desirable future character rather than any specific commitment to a particular detailed design.

Comments or questions regarding the Issues Report or the Transitway and High-Occupancy Vehicle Master Plan should be directed to:

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TRANSITWAY AND HIGH-OCCUPANCY VEHICLE NETWORK MASTER PLAN DEVELOPMENT PROCESS

Planning Board submits, and Council approves:

Annual Work Program

Planning staff initiates community participation and prepares:

Issues Report

Planning staff reviews Issues Report with Planning Board, and then prepares:

Alternatives Report

Planning staff reviews Alternatives Report with Planning Board, and then prepares:

Staff Draft Plan

Planning Board reviews Staff Draft, and, with modification as necessary,
approves plan as suitable for public hearing.

**Public Hearing (Preliminary)
Draft Plan**

Planning Board reviews public hearing testimony, receives Executive comments at Board worksessions,
and adjusts Public Hearing Draft to become:

Planning Board (Final) Draft Plan

Executive reviews Planning Board Draft and forwards fiscal impact analysis and comments to County Council.

**Planning Board (Final) Draft Plan
Transmitted to County Council**

Council holds public hearing and worksessions and approves, disapproves,
or amends Planning Board Draft, which is forwarded to M-NCPPC to become:

Approved and Adopted Master Plan

THE MASTER PLAN DEVELOPMENT PROCESS FOR
THE TRANSITWAY AND HIGH-OCCUPANCY VEHICLE
NETWORK MASTER PLAN

Issues Report (Phase I) - This document, prepared by the Montgomery County Planning Department, identifies the broad range of issues to be addressed, the methodology to be employed, and the goals to be achieved in the development of the master plan. Additionally, the Issues Report describes the work program for the master plan process, including citizen participation. Once completed, the Issues Report is presented to the Montgomery County Planning Board for its review and consideration. Following the Planning Board's review, staff then proceeds to develop the alternatives Report.

Alternatives Report (Phase 2) - This document is prepared by the Montgomery County Planning Department. The publication of an Alternatives Report is unique to the development of the Transitway and HOV Network Master Plan. The Alternatives Report, which is a major step in the development of the Staff Draft Plan, will contain a set of alternative network corridors to be evaluated and refined and will recommend that one of these network alternatives be approved by the Planning Board for further refinement and detailed delineation. Staff will hold public forums to present the recommendations of the Alternatives Report and to receive public comment. The Planning Board will have open worksessions to consider the staff recommendations and public comments before taking action on the Alternatives Report. The refinement and delineation of the network in the approved Alternatives Report will be conducted during the development of the Staff Draft Plan.

Staff Draft Plan (Phase 3) - This document is prepared by the Montgomery County Planning Department for presentation to the Montgomery County Planning Board. A Public Hearing (Preliminary) Draft Plan is then prepared for approval to go to public hearing by the Planning Board. The Public Hearing (Preliminary) Draft Plan incorporates those preliminary changes to the Staff Draft Plan that the Planning Board considers appropriate.

Public Hearing (Preliminary) Draft Plan - This document is a formal proposal to create or amend an adopted master or sector plan prepared by the Montgomery County Planning Board of The Maryland-National Capital Park and Planning Commission. It is prepared for the purpose of receiving public hearing testimony. Its recommendations are not necessarily those of the Planning Board. Before proceeding to publish a Planning Board (Final) Draft Plan, the Planning Board holds a public hearing. After the close of the record of this public hearing, the Planning Board holds open worksessions to review the testimony and to adjust the Public Hearing (Preliminary) Draft Plan.

Planning Board (Final) Draft Plan - This document is the Planning Board's recommended Plan. After October 1, 1992, changes in the Regional District Act require the Planning Board to transmit the Plan directly to the County Council with copies to the County Executive. The Regional District Act then requires the County Executive, within sixty days, to prepare and transmit a fiscal impact analysis of the Planning Board (Final) Draft Plan to the County Council. The Executive may also forward to the County Council any other comments and recommendations regarding the Planning Board (Final) Draft Plan within the sixty-day period.

After receiving the Executive's fiscal impact analysis and comments, the County Council may hold a public hearing to receive public testimony on the Plan. After the close of record of this public hearing, the Council's Planning, Housing, and Economic Development (PHED) Committee holds open worksessions to review the testimony and revise the Planning Board (Final) Draft Plan. The County Council, after its worksessions, then adopts a resolution approving, disapproving, or amending the Planning Board (Final) Draft Plan.

Adopted Amendment - The Plan approved by the County Council is forwarded to The Maryland-National Capital Park and Planning Commission for adoption. Once adopted by the Commission, the Plan officially amends the various master or sector plans cited in the Commission's resolution adopting the master plan.

ISSUES REPORT APPENDIX

TRANSITWAY AND HIGH-OCCUPANCY VEHICLE NETWORK MASTER PLAN

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APPENDIX

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THE
MARYLAND-NATIONAL
CAPITAL PARK AND
PLANNING COMMISSION

APPENDIX A

*DRAFT
GLOSSARY
OF
TERMS
RELATED
TO THE
TRANSITWAY &
HIGH-OCCUPANCY
VEHICLE
NETWORK
MASTER
PLAN*



GLOSSARY OF TERMS

Acoustic Buffer: A building, fence, berm or other structure that blocks noise from adjacent uses.

Adequate Public Facilities Ordinance (APFO): The APFO, adopted in 1973, is a tool to promote orderly growth by synchronizing development with the availability of the public facilities (transportation facilities, sewer, water, safety, police) needed to support it. Refinements to the ordinance were adopted in 1986.

The APFO is a part of the Subdivision Ordinance and is administered by the Planning Board at time of subdivision, after review by other agencies, including the County Executive. The subdivision regulations require that "public facilities" be existing or programmed for construction within a defined time period before they can be considered in granting approval of a subdivision. These facilities, therefore, would normally be included in the Capital Improvements Program (CIP), as described below. Criteria and guidelines for administration of the APFO are included in the Annual Growth Policy, which is adopted annually by the County Council.

Amenity: Privately provided attributes within a development that enhance public enjoyment. Amenities can include physical enhancements to public and private spaces which make those spaces more inviting to the general public.

Annual Growth Policy (AGP): A policy document adopted annually by the County Council intended to facilitate and coordinate government's powers in limiting or encouraging growth and development in the County. The AGP addresses conflicting policies of various agencies that may be serving different public interests, and provide guidance in resolving differences. It includes criteria and guidance for the administration of the APFO, and establishes development capacity Staging Ceilings for each policy area of the County. The overall purpose is to chart, each year, a direction for government which will enhance the quality of life of the County's present and future residents.

The AGP is prepared by the Planning Board based on its comprehensive land use process, data collected through administration of the Adequate Public Facilities Ordinance, and through population and housing projections. It is prepared in close coordination with the Executive's CIP, and is transmitted to the County Executive in Final Draft Form, after public hearings. The County Executive submits his modifications in writing to the County

Council, and Council must adopt the AGP by June 30 of each fiscal year. (The legislation providing for the AGP was adopted by the County Council in May 1986.)

Approved Road Program (ARP): The County Executive shall publish periodically an Approved Road Program which shall list all roads programmed in the current adopted CIP and the Maryland CTP for which: (A) in the case of the CIP, 100 percent of the estimated expenditures for construction costs have been appropriated; and (B) the County Executive has determined that construction will begin within two years of the effective date of the Approved Road Program. Roads required under Section 302 of the charter to be authorized by law are not considered programmed until they are finally approved in accordance with Section 20-1 of the Code. The ARP constitutes the list of roads which can be used when conducting a Local Area Transportation Review.

Arterial Highway: A road that provides a balance between the traffic service and land access functions. Commercial and industrial land uses may have driveway access; single-family residential may not. Master planned as four-lane roads (current design calls for either a landscaped median or a continuous left turn lane) with curb and gutter (closed section) where traffic warrants four lanes, but may be two-lanes with shoulders and open drainage system in areas of light traffic or on an interim basis. Right-of-way is usually 100 feet; older roads or roads to be maintained as two-lanes roads may have 80-foot rights-of-way. Sidewalks and bikepaths are appropriate; bike paths may sometimes be adjacent to travel lanes.

Base Density: The maximum number of dwelling units or square footage of nonresidential space per unit of land that can be built in an area in the absence of bonuses which accrue from the application of transferable development rights (TDR's), floating zones, planned development zones, or public amenities and benefits recommended in a master plan; that density which is reasonable and acceptable from a planning perspective without consideration of such bonuses.

Base Zone: A Euclidean zone recommended in a master plan to achieve the base density.

Berm: A continuous earth mound of varying height designed and placed to block the noise of and view to adjacent, incompatible uses.

Best Management Practice (BMP): A practice or combination of practices, that is determined to be the most effective, practicable (including technological, economical and institutional considerations) means of preventing or reducing the amount of pollution generated by non-point sources to a level compatible with water quality goals.

Bicycle Facilities: Improvements and provisions to accommodate and encourage bicycling, for example, parking facilities, mapped bikeways, shared roadways.

Bicycle Lane: A portion of roadway, designated by signing and pavement marking, for the preferential or exclusive use of bicyclists.

Bicycle Path: A bikeway physically separated from motorized vehicular traffic by an open space or barrier within the road right-of-way or in an independent right-of-way.

Bicycle Route: A designated and marked segment of a system of bikeways.

Bikeway: Any path or way which is designated as being open to bicycle travel, regardless of whether such facilities are exclusive or shared.

Boulevard: A divided roadway with a wide median and a formal streetscape of regularly spaced trees on both sides, as well as the median. (See Urban Boulevard.)

Buffering: Isolation or separation of different land uses by a third land use, by open space, or by a physical separator such as a wall. Low density offices and townhouses are frequently used to separate commercial and detached residential areas.

Build-out: The end point of the development of a site or area, where all development capacity has been used.

Business District Street: Similar to Arterial Highway, but only in commercial areas. Sidewalks are wider than along an arterial. Bicycles may share travel lane with other vehicles.

Calibration: The adjustment of model parameters to reasonably reproduce, or simulate, observed values.

Capital Improvements Program (CIP): A six-year comprehensive statement of the objectives of capital programs with cost estimates and proposed construction schedules for specific projects. The CIP is submitted annually to the County Council by the Executive.

The CIP is the tool through which locally funded public facilities, such as sewers, local roads, storm drains, schools, libraries, parks, etc., can be scheduled and built, in coordination with, and guided by, the Annual Growth Policy and area Master Plans. It is used in conjunction with the APFO in terms of programming for public facilities needed to service subdivisions.

Carrying Capacity: (1) The capacity of public roads to carry traffic at a reasonable level of service without congestion. (2) The capacity of the water and sewerage system to supply water and carry off liquid waste generated by development.

Ceiling: See Staging Ceiling.

Central Business District (CBD): A major commercial center characterized by large buildings, high volumes of pedestrian and vehicular traffic, and substantial numbers of local trips. In Montgomery County, central business districts are also areas in which certain high density zones may be used. There are four in the County, namely; Bethesda, Friendship Heights, Silver Spring and Wheaton.

Citizens Advisory Committee: This is a committee of citizens and building industry representatives appointed by the Planning Board, plus ex-officio representatives from the County Executive staff.

Cluster Development: An optional method of development in single-family zones that encourages the provision of community open space or active or passive recreation as well as the preservation of trees. Lots can be of varying sizes and shapes and may be smaller than the minimum permitted in a conventional subdivision in the same zone.

Commercial Revitalization Program: A county-operated public-private program to improve the economic and physical condition of certain older shopping areas.

Concept Plan: A generalized idea or set of ideas that forms the basis for a master plan.

Conservation: The continuing protection and management of natural resources.

Conservation Area: An undisturbed natural area established for the long-term protection of natural features in order to maintain select, viable plant and animal communities, and in some cases, to provide compatibility between adjacent land uses.

Conservation Easement: A restriction on the land and the natural features on this land. This easement is shown on the record plat and its terms and conditions are recorded in the county's land records. Most commonly, the agreement prohibits removal of healthy, mature trees and shrubs, and changes to the scenic character of the land without written permission from M-NCPPC's Planning Department.

Consolidated Transportation Program (CTP): The State Highway Administration's five year construction program for roads and other transportation facilities within the State of Maryland. This

program is an important consideration in transportation planning by the County since many of the major roads in the area are State highways.

Corridor Cities: Areas of more intense development located along a major auto route, linked by transit and greenways. Their core areas are built with dense commercial uses, and ringed with lower intensity residential communities.

Critical Lane Volume (CLV): The sum of traffic volumes that cross at one point in an intersection. A technique used to determine the level of service of an intersection.

Cross Section: Measurement of a stream's channel and floodplain at a right angle to its direction of flow. Also, the depiction of a roadway or transitway indicating the width of sidewalks, vehicular lanes, medians, etc.

Crosswalk: A dedicated or publicly owned right-of-way across a street intended primarily for pedestrians marked by striping or special paving, but which may include utilities where necessary, and from which motor propelled vehicles are excluded.

Cul-de-sac: A local street open at one end only with a special turning area at the other end.

Day/Night Noise Levels (Ldn): An average sound pressure level, reflecting the variations in noise over time, including a weighting for nighttime (10 p.m. - 7 a.m.) levels to account for the greater degree of distraction experienced at night while trying to sleep. This description is currently being used by the U.S. Environmental Protection Agency and the State of Maryland for their noise standards.

Decibel (dBA): The standard expression for units of sound, with a weighting to account for the sensitivity of the human ear.

Dedication: Donation of parkland and rights-of-way for roadways and transitways in connection with the development of a subdivision.

Demand Management Program: Actions designed to alleviate traffic congestion by reducing dependence on the single occupant car through transit and carpooling alternatives.

Density: The ratio of residential units to the acreage of the property.

Developer: An individual, partnership or corporation (or agent therefor) that undertakes the subdivision of land or the drawing up and submission of a subdivision plat showing the layout of the land and the public improvements required thereon. Includes

all persons involved in successive stages of the project, even though such persons may change and ownership of the land may change. Also called Subdivider.

Development: 1) Changes in land forms and biota caused and managed by man which alter their function and/or appearance; 2) The act of building structures and installing site improvements, both public and private.

Development Pipeline: This is the amount of future residential and non-residential development with subdivision approval which will be subtracted from the adopted staging ceilings. It is measured in the same units as the staging ceilings, jobs, and housing.

Development Right: One dwelling unit of transferable density in the transferable development rights program. Also see Transfer of Development Rights.

Dwelling Unit (DU): May be single-family detached, town-houses, garden apartments, and high rises. Each dwelling unit is counted as one unit.

Easement: A contractual agreement to gain temporary or permanent use of, and/or access through, a property.

End-State-Development: Future land use as prescribed by the most recent master plan, assuming total implementation of that plan. In actual practice, development densities rarely exceed 80 percent of ultimate land use.

Euclidean Zones: See Zoning.

Fiscal Year (FY): The accounting year of a particular entity. It may or may not coincide with a calendar year. The County government's fiscal year is July 1 to June 30.

Floating Zones: See Zoning.

Floodplain: A relatively flat or low land area adjoining a river, stream, pond, stormwater management structure, or watercourse subject to periodic, partial or complete inundation; or an area subject to unusual and rapid accumulation or runoff of surface water as a result of an upstream dam failure.

Floodplain Plan and Profile Maps: Maps based upon hydrologic and hydraulic analyses which depict the water surface elevation of a given frequency flow on profile and topographic plan maps.

Floor Area Ratio (FAR): The ratio of the gross floor area of a building to the area of the lot on which it is located. Parking and non occupiable space in the building are generally excluded

from the computation. For example, a building with gross floor area of one acre on a two acre lot would have a Floor Area Ratio of 0.5.

Forest: A biological community dominated by trees and other woody plants covering a land area of 10,000 square feet or greater. Forest includes: (1) areas that have at least 100 trees per acre with at least 50 percent of those trees having a 2 inch or greater diameter at 4.5 feet above the ground; and (2) forest areas that have been cut but not cleared. Forest does not include orchards.

For the purpose of implementation of the Montgomery County Forest Conservation law, this definition will be interpreted to mean 100 live trees per acre with at least 50 trees per acre having a 2 inch or greater diameter at 4.5 feet above the ground.

Freeway: A road that provides total traffic service and no land access. A freeway has multiple lanes, interchanges to provide free flow traffic connections with cross-streets, and traffic moves at a high speed.

Fringe Parking Lot: A parking lot, physically distant from the final destination of its users, which serves as a transfer point from private transportation to public transportation or car pools.

General Plan: The Countywide comprehensive plan entitled On Wedges and Corridors, adopted in 1964 and updated in 1969. It provides the overall framework for the County's future. Each master plan adopted since 1969 amends the General Plan.

Geographic Information Systems (GIS): The integration of database technology with computerized maps which enable the generation of high quality maps based on the analysis of underlying layers of geographic information. GIS allows all information in the database to be integrated for any location covered by the database.

Grade: The inclination or slope of a stream channel, conduit or natural ground surface, usually expressed in terms of the ratio or percentage of number of units of vertical rise or fall per unit of horizontal distance.

Grade Separations: Physical separation of two or more roads at their intersection by constructing the roads so that one road passes above or below the other.

Green Corridors: Roadways that are extensively landscaped along their sides and in their medians.

Greenway: A linear corridor of open space following natural or man-made features including environmental and recreational facilities, environmental preserves, and communities.

Gridlock: A traffic condition in which queues at intersections back up through other intersections, inhibiting movement there, and causing movement within the network to be very slow.

High-Occupancy Vehicle (HOV): A motorized vehicle with two or more occupants. This can include cars, vans and buses.

Hiker-Biker Trail: A paved trail used for both walking and bicycling..

Historic Preservation: The identification, designation and regulation - for purposes of protection, preservation and continued use and enhancement - of those sites, structures with their appurtenances and environmental settings, and districts that are of historical, architectural, archaeological or cultural value. In Montgomery County, historic preservation activities are directed by the Master Plan for Historic Preservation and the Historic Preservation Ordinance, Chapter 24A of the Montgomery County Code.

Historic Tree: A tree determined by the County Council to be of high value because of its association with historic events that have occurred in the County and that is included in the Montgomery Master Plan for Historic Preservation.

Homeowners Associations: When development occurs under the cluster provisions of the subdivision regulations, a homeowners' association is frequently required to assure the maintenance and operation of private open space, recreational facilities, private streets, or other common space in the subdivision. The homeowners association generally levies a fee in the form of a property assessment to maintain these facilities. It also must provide a management structure to supervise their orderly maintenance.

Impervious Surface: That portion of the land surface through which water cannot penetrate.

Impoundment: A pond, lake, basin or some other space, either natural or created in whole or in part by the building of engineering structures, that is used for the storage, regulation and control of water. Also called a detention basin.

Improvements, Public: Any or all of the following; roads and streets, alleys, grading, road pavement, curbs and gutters, sidewalks, crosswalks and pedestrian paths, water mains, sanitary sewer lines and drainage structures, curb returns, sidewalk and driveway entrances in right-of-way, guard rails, retaining walls, sodding, planting, monuments, street lights, and stormwater management.

Industrial Street: Similar to Arterial Highway, but only in industrial areas. Sidewalks are wider than along an arterial. Bicycles may share travel lane with other vehicles.

Infrastructure: The built facilities, such as streets, bridges, schools, water and sewer lines, other utilities, parks, etc., that service a community's developmental and operational needs.

Jobs/Housing Ratio: The balance between the number of jobs and the number of housing units in a defined planning area. The ratio is calculated by dividing the total number of jobs by the total number of housing units in a given area.

Landmark: Any visual aid to navigation or any feature that provides symbolic meaning to its surroundings.

Land Use Plan: The land use element of an approved and adopted General, Master, Sector, or Functional plan as distinguished from the Zoning Plan.

Level of Service (LOS): A traffic engineering term that describes relative operating conditions and congestion levels on a segment of roadway or at an intersection. There are six levels, ranging from free flowing conditions (level of service "A") to very heavy traffic, extremely unstable flows, and long delays (level of service "F").

Light Rail Transit (LRT): An urban transportation system that uses electrically powered rail cars operating singly or in short trains on fixed guideways. It maybe grade separated, and it loads passengers from low to medium-height platforms.

Line-Haul: Long distance, frequently express, transit service, either publicly or privately operated. It generally operates on major roadways and does not provide local pick-up or distribution within communities.

Local Area Review: The portion of the Staging Chapter which requires small scale review and evaluation of a particular area of the County in order to determine whether there are Adequate Public Facilities to serve a particular subdivision.

Local Area Transportation Review (LATR): The process used to determine if the proposed development will produce excessive local detrimental impact beyond the capacity of existing and programmed public facilities.

Local Map Amendment: A change of zoning, normally sought by the owner or other person having a proprietary interest. Applications for local map amendments may be filed only during the months of February, May, August, and November, and are considered

according to procedures specified in the Zoning Ordinance. A local map amendment can include more than one tract of land. Land can be combined for purpose of rezoning. Approval of a local map amendment normally requires the affirmative vote of a majority (five members) of the County Council. If the proposed rezoning is contrary to the zone recommended in a master plan, however, approval requires affirmative vote of six Council members, unless the Planning Board has recommended in favor of that approval, in which case a five-vote majority of the Council is sufficient for approval.

Mainstem: The principal stream in a watershed to which smaller streams are tributary.

Major Highway: A road that provides a high level of traffic service and a low degree of land access. Master planned for four or six travel lanes (usually six) and a landscaped median within a 120, 150, or 170 foot right-of-way. New construction is generally not allowed to have driveway connections and intersecting streets are spaced relatively far apart. Sidewalks and bikepaths are appropriate along a major highway.

Mandatory Referral: Under the Regional District Act "no road, park, or other public way or ground, no public (including federal) buildings or structures, and no public utility whether publicly or privately owned shall be located, constructed, or authorized in the regional district until and unless the proposed location, character, grade and extent thereof has been submitted to and approved by the [Maryland-National Capital Park and Planning] Commission." (Art. 28, #7-112 of the Regional District Act.) One of the major purposes of this review authority is to assure that public land acquisition and development are compatible with surrounding development, both existing and planned. Mandatory referral recommendations are not binding on the public agency, but do provide an opportunity to encourage the agency to modify their proposals, where necessary, in order to improve their compatibility and reach or exceed private development requirements.

Manual for Tree Preservation and Reforestation: A document, approved by the Planning Board in accordance with the Administrative Procedures Act, having detailed instructions for preparing and evaluating tree preservation plans, and for tree planting and protection.

Maryland Department of Natural Resources (DNR): State agency responsible for protecting, restoring and enhancing the vast yet vulnerable land, water and living resources in the State of Maryland.

Maryland Department of Transportation: The State of Maryland government arm responsible for planning and implementing the improvements to those elements of the transportation system which are the administrative responsibility of the state.

Maryland Rail Commuter (MARC): An agency within the Maryland Transit Administration that provides commuter rail services along the Brunswick Line, (from Martinsburg, West Virginia to Washington, D.C.) the Penn Line, (from Penysville to Washington, D.C.) and the Camden Line (from Baltimore to Washington, D.C.).

Maryland State Highway Administration (SHA): The State of Maryland government arm responsible for the construction and maintenance of the state highway system. The state is divided into seven engineering districts where right-of-way and legal offices are maintained.

Maryland-National Capital Park and Planning Commission (M-NCPPC): A bi-county agency created by the General Assembly of Maryland in 1927. The Commission's geographic authority extends to the great majority of Montgomery and Prince George's Counties: the Maryland-Regional District (M-NCPPC planning jurisdiction) comprises 1,001 square miles, while the Metropolitan District (parks) comprises 919 square miles, in the two Counties.

The Commission has three major functions:

- (1) the preparation, adoption, and from time to time amendment or extension of the General Plan for the physical development of the Maryland-Washington Regional District;
- (2) the acquisition, development, operation, and maintenance of a public park system; and
- (3) in Prince George's County only, the operation of the entire County public recreation program.

The Commission operates in each county through a Planning Board appointed by and responsible to the county government. All local plans, recommendations on zoning amendments, administration of subdivision regulations, and general administration of parks are responsibilities of the Planning Boards.

Master Plan: A document which guides the government and private individuals in the way an area should be developed. In Montgomery County, master plans amend and/or detail, for portions of the County, the recommendations of the County's General Plan.

Maximum Expansion Limits (MEL): The proposed boundary of a City, and "within the MEL" means those parcels located between the City limits and the Maximum Expansion Limits.

METRO: The Washington Metropolitan Area Transit Authority's rapid rail transit system.

Metropolitan-Washington Council of Governments (COG): The regional organization of the Washington area's major local governments and their governing officials. COG works toward solutions to such regional problems as growth, transportation, inadequate housing, air pollution, water supply, water quality, economic development and noise, and serves as the regional planning organization for Metropolitan Washington.

Minibus: Community bus service operated with smaller vehicles than are normally used for line-haul service. The smaller vehicles are suitable for local passenger pick-up and delivery within communities.

Mitigation: Part of the sequence of actions consisting of: 1) avoidance; 2) minimization; 3) mitigation; and 4) replacement, where appropriate. Avoidance is always the first priority.

Mixed Street: A street shared by all road users but which emphasizes pedestrian circulation. Vehicular traffic is limited and slowed by streetscape design elements such as street trees, street furniture and paving treatments.

Mixed-Use Development: The integration of different, usually compatible or mutually supportive, land uses on a site or into a single building or complex.

Modal Choice: One of the stages in forecasting transportation demand in which an estimate is made of the percentage of trips taken in each available transportation method for each origin and destination pair, based on the relative merits of each method.

Modal Split: Trips made in a given transportation method as a percent of all trips. Most often refers to transit trips in a peak hour.

Montgomery County Council: The elected legislative body of the County which has final authority on all matters pertaining to planning and zoning. There are nine members elected to four-year terms. They set the policy for the County in all land use matters.

Montgomery County Department of Environmental Protection (DEP): The local agency that is responsible for fire prevention plan review and licenses, inspection and licenses, solid waste collection and disposal, and planning.

Montgomery County Department of Transportation (MCDOT): The local agency that is responsible for constructing transportation facilities and operating transportation services in the County.

Montgomery County Planning Board: The five-member body which is appointed by the County Council to advise it on all matters pertaining to planning and zoning, and which is charged with administering the subdivision regulations. Of the five members, no more than three may belong to the same political party.

Moratorium: A temporary ban on building, based on a lack of available public facilities, like roads or sewer. A moratorium can be lifted when the facilities are provided by either the local government or private developer.

Natural Resources Inventory: A complete analysis of existing natural features, forest and tree cover on a site. The natural resources inventory (NRI) must cover the development site and first 100 feet of adjoining land around the perimeter or the width of adjoining lots, whichever is less. Natural features include topography; steep slopes; perennial and intermittent streams and major drainage courses; 100-year floodplain; wetlands; soils and geologic conditions; critical habitats; aerial extent of forest and tree cover; cultural features and historic sites; necessary buffers.

Natural Resources: Things in nature, such as soils, water, minerals, landforms, plants, and animals, that are of value to society.

Network Data: Data for transportation analysis that defines the highway network as a series of numbered links each described by capacity, speed, length, and location.

Node: A physical focal point of a community activity, often an intersection of roads or concentration of buildings.

Non-Conforming Use: A building, structure, or use which was lawful when established and that continues to be lawful, but which no longer conforms to the requirements of the zone in which it is located because of the adoption or amendment of the Zoning Ordinance or the zoning map.

Nontidal Wetland: An area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation. Nontidal wetlands will be designated using the approach (i.e., hydrology, soils, and vegetation) enumerated in the U.S. Environmental Protection Agency Wetland Identification and Delineation Manual currently in use by the Maryland Department of Natural Resources.

One-Hundred Year Ultimate Floodplain: The area along a river, stream, pond, SWM structure, or watercourse that would be inundated by a 100-year flood, based on ultimate development of the watershed under existing zoning.

On-Site Detention/Retention Ponds: Ponds that act as a control on erosion while at the same time reduce the discharge of peak runoff flows to the natural drainage area.

On-Site Stormwater Management: Stormwater management techniques applied within a given site boundary, usually near the source of stormwater runoff.

Open Spaces: Areas usually intended for recreational, agricultural, preservation or scenic purposes.

Operational Controls: Methods for improving traffic flow that do not involve major physical change to a roadway. Examples include progressive signal timing, reversible lanes, left or right turn lanes, carpool and bus lanes, or turn restrictions at intersections.

Optional Density: Density in dwelling units, or square footage of nonresidential space per unit of land, that would be compatible with surrounding land uses (existing and proposed) and would be within the carrying capacity of the public facilities. Optional density can be achieved through the use of various bonuses, including transferred development rights (TDR's) or planned development (PD). Also see Planned Development Zoning and Transfer of Development Rights.

Owner: A person or corporation holding a legal title in the land, but not including a mortgagee, a lienor, a lessee or a contract purchaser.

Park: A tract of land or water that provides for public leisure activities and/or the protection of natural resources.

Park and Ride Lots: Parking lots which allow all-day commuter parking to enable the auto driver to connect with carpools or transit.

Park Take-Lines (also called park acquisition lines): Proposed boundaries for park acquisition and inclusion in the County park system. Areas considered for stream valley parks generally include floodplains, steep slopes, and sites of environmental sensitivity.

Path: Any travel route through a community. Streets, sidewalks, canals, rail lines are all paths that help define the function and shape of a community.

Peak-Hour Trips: Trips made in any transportation mode during the busiest 60-minutes within the peak periods of morning (7-9 am) and evening (4-6 pm).

Percent Slope: Measured in feet, vertical rise divided by horizontal run in the steepest 100 foot segment, multiplied by 100.

Perennial Stream: A stream which has base flow all year.

Pipeline: See Development Pipeline.

Planned Development: An area of minimum contiguous size, as specified by ordinance, developed according to plan as a single entity and containing one or more structures with appurtenant common areas.

Planning: The orderly, reasoned process of evaluating the existing and future needs of an area and its residents, and the preparation of alternatives and recommendations to meet those needs.

Point Source Pollution: Pollutants emanating from specific and identifiable sources and discharged to specific locations. These pollutants are often liquids discharged from a pipe.

Policy Area: See Staging Policy Area.

Pollution: A condition created by the presence of harmful or objectionable material in water.

Power of Eminent Domain: The right of government to take private property for public use with just compensation being given to the owner.

Preliminary Plan: A plan for a proposed subdivision or resubdivision to be prepared and submitted for approval prior to preparation of a subdivision plat.

Preliminary Subdivision Plan: A plan subject to the review and approval procedures of Chapter 50, "Subdivision" of the Montgomery County Code.

Primary Residential Street: A street that provides a moderate level of traffic service and a high level of land access. Two travel lanes are provided within a 70-foot right-of-way. An urban design provides 36 feet of roadway pavement -- sufficient for two lanes of moving traffic with parking along each side -- with curb and gutter. A rural design provides 24 feet of pavement with a shoulder (usually grass) and an open drainage system. Sidewalks are appropriate though extremely difficult to provide on the rural

design. Residences are usually allowed to have driveways on this type of street. MCDOT will not provide neighborhood protection measures to reduce traffic along a master planned primary street.

Programmed Facility: A capital facility project which is contained within the approved County Capital Improvements Program, the State Consolidated Transportation Program, or program of Rockville or Gaithersburg, such that 100 percent of the expenditures for construction or operation are estimated to occur within the first four years of the applicable program. Where such road project either crosses several policy areas or will be built over a period of time in identifiable segments, the appropriate sections will be identified by the Planning Board to: (1) locate the segments in the appropriate policy areas, and (2) specify whether the segments meet the basic criteria for a programmed facility.

Progressive Signal System: A series of traffic lights, timed to permit groups of vehicles to pass through several successive intersections without stopping.

Public Right-of-Way: Property owned by the public and occupied or intended to be occupied for use as a public roadway, bikeway, shoulder, sidewalk, transitway, or for utility pipes, transmission lines, or public open space amenity. Typically, public right-of-way is separate and distinct from a privately owned lot or parcel.

Receiving Area: An area designated on a master plan to receive transferred development rights. The addition of development rights permits a higher density of development than that permitted by the base density, but the density may not exceed that recommended in the master plan. The base density may be increased by one dwelling unit for each development right received. Development rights are transferred by easement and the transfer is recorded in the County land records. Also see Base Density and Transfer of Development Rights.

Record Plat: A preliminary plan of subdivision which has been approved for recordation by the Montgomery County Planning Board or is already a recorded plat in the official Montgomery County land records.

Resubdivision: A change in any lot line of a recorded lot or parcel of land. Resubdivision includes the assembly of recorded lots or parts of lots. A resubdivision is a subdivision.

Retro-fit: To add a complementary element to an already existing environment.

Ride-On: Local, County-operated minibus system.

Rideshare: A carpool or vanpool arrangement.

Right-of-Way: A strip of land occupied or intended to be occupied by a road, crosswalk, railroad, electric transmission line, oil or gas pipeline, water main, sanitary or storm sewer main or for other special use. To be shown on a record plat as separate and distinct from the adjoining lots or parcels, and not included within their dimensions. Rights-of-way maintained by a public agency shall be dedicated to public use on the plat.

Road Code: Chapter 49 of the Montgomery County Code which specifies how streets and roads are to be constructed, used, and abandoned.

Road Construction Code: The Montgomery County road construction code and standard specifications.

Roadway: See Street.

Screenline: A line drawn on a map across several roads going in the same general direction, from which a summary of vehicle trips can be made. This permits composite analysis of traffic and is a means for comparing computer synthesized traffic with actual traffic counts.

Secondary Residential Street: A street that provides very limited traffic service and a very high level of land access. This street is intended to serve the immediate residential area only. The street provides two travel lanes within a 60-foot right-of-way. An urban design provides 26 feet of paving with curb and gutter or 24 feet of paving with shoulders. Sidewalks are usually appropriate though difficult to provide the rural design. Bicyclists should use the travel lane. MCDOT will provide neighborhood protection measures to reduce traffic along this type of street if needed. Tertiary streets provide land access to residences immediately adjacent to the street. Right-of-way may be as narrow as 27 feet.

Sectional Map Amendment: A comprehensive rezoning, initiated by the Planning Board or County Council, covering a section of the County, and usually including several tracts of land. It normally follows a master plan study. It may propose various zones to be applied to various individual tracts. The County Council must hold a public hearing on a proposed sectional map amendment. Since enactment of a sectional map amendment is considered a legislative action of the government, and is intended as a comprehensive implementation of public policy, it does not require a finding of a change in the character of the neighborhood or a mistake in the original zoning. Approval is by majority vote of the council.

Sector Plan: A master plan for an area surrounding a transit station, for a central business district, or other small area of intense development.

Sending Areas: Areas located within the Agricultural Reserve (also see), which have a basic right of development under the rural density transfer zone of one unit per 25 acres, but which are assigned transferable development rights at one unit per five acres.

Setback: The required distance that a proposed structure or parking area must be located from the property lines or from other buildings. Setbacks are specified in certain zones.

Site Plan: A detailed plan, required in certain zones, that usually shows proposed development on a site in relation to immediately adjacent areas. It indicates roads, walks, parking areas, buildings, landscaping, open space, recreation facilities, lighting, etc. The Planning Board must approve the site plan before building permits can be issued.

Site Plan Review: The detailed site plans carry out the policies and recommendations of the master plan. As there is flexibility in the layout of buildings and other features on the site, the Planning Board and its staff carefully review these elements with ample opportunity for public input.

Site plan review is required of all floating zones and as a result of the use of optional development provisions of other zones. Further, certain parking facilities that fall under the provisions of the off-street parking section of the Zoning Ordinance are also subject to site plan review.

Site plan review is more detailed than development plan review. It examines such elements as building mass and location, on-site vehicular and pedestrian circulation, parking area design, grading, landscaping, lighting, fencing and signage. Through this review, issues of compatibility with adjacent land uses can be resolved.

Slope: The inclination of gradient from the horizontal of a surface, stream bed, energy line, etc. Usually measured in feet/feet.

Slope Easement: An easement to permit the creation and maintenance of slopes necessary to stabilize construction or to stabilize lands adjacent to construction.

Special Exception: Most zoning classifications include a set of permitted uses and a set of "special exception" or conditional uses. These are uses that, because of the level or nature of the activity associated with them, need to be carefully reviewed before being allowed to be developed on land in that zoning classification. In residential areas, for example, special exception uses include, among others, day-care centers for more than six children, medical clinics and horticultural nurseries.

Gas stations are almost always special exception uses. Hotels are special exception uses in most industrial zones.

The Zoning Ordinance contains, for each special exception use, a set of criteria that must be met by an application. The applications are reviewed by staff of the Montgomery County Planning Department and recommendations are made by The Montgomery County Planning Board. The decisions regarding each application are made by the Montgomery County Board of Appeals.

Specimen Tree: A tree that is a particularly impressive or unusual example of a species due to its size, shape, age, or any other trait that epitomizes the character of the species.

Spring: A surface where, without the intervention of man, water issues from a rock or soil onto the land or into a body of water.

Staging: The staging plan guides the sequence of development based on public policies, market projections, trigger events, project packages, or funding. It may address land development strategies, organizational mechanisms, e.g., transportation management districts, capital improvements, or other public or private investments. The staging plan need not be date specific.

Staging Ceiling: A total amount of development expressed in terms of housing units and jobs that has been determined by the Montgomery County Council to be balanced appropriately, on the basis of an areawide average, with the existing and programmed transportation facilities for the area.

Housing units may be single-family detached, single-family attached, garden apartments, and high rises. Each housing unit is counted as one unit.

Staging Policy Area: A geographic subarea of the County, delineated by the Planning Board, as adopted by the Council in the Annual Growth Policy for the purpose of staging analysis and the establishment of transportation staging ceiling capacities as appropriate.

Steep Slope: A slope in which the percent slope equals or exceeds 25 percent, or 15 percent when the associated soils are considered highly erodable by the USDA Soil Conservation Service Highly Erodable Land Report for Montgomery County.

Stormwater Management: The application of various techniques for mitigating the adverse effects of stormwater runoff.

Stream: A body of flowing water in a natural surface channel or well-defined open or closed conduit.

Stream Valley Buffer: An undisturbed strip of natural vegetation contiguous with and parallel to, the bank of a perennial or intermittent stream, which may be designed to:

- * protect hydraulically adjacent slope areas;
- * maintain or improve the water temperature regimen/water quality of the stream(s);
- * protect natural wetlands;
- * provide groundwater storage/recharge for a stream;
- * complement regulations pertaining to the 100-year ultimate floodplain;
- * provide wildlife habitat, open space, or both; and
- * complement on-site erosion/sediment control measures by serving as a filter trap.

Street, Center Line of: A line established as a center line of a street by any state, county, or other official agency or governing body having jurisdiction thereof and shown as such on an officially adopted or legally record map. In the absence of an official center line, the center line shall be established by the Montgomery County Planning Board.

Street Width: The shortest distance between street lines, measured at right angles to the center line of the street.

Structured Parking: An above-ground or below-ground parking garage.

Subdivision: (1) The division of a lot, tract, or parcel of land into two or more lots, plots, sites, tracts, parcels or other divisions for the purpose, whether immediate or future, of sale or building development. (2) The recombination of lots previously created into a new configuration.

Tertiary Residential Street: The purpose of this street is to provide direct access to residential development containing not more than 75 units. The standard right-of-way width of a tertiary street is 50 feet. However, the Planning Board may approve a lesser width if it can be demonstrated that this lesser width is environmentally better and either improves compatibility with adjoining properties or allows better use of the parcel. In no case shall the right-of-way be less than 27'-4" for two-way traffic.

Topographic Map: A map showing the various topographic features of a given area, such as hills, valleys, mountains, slope

of the land surfaces, usually by means of contours or lines connecting points of equal elevation.

Traffic Management District (TMD): A designated area established by local legislation, that attempts to mitigate traffic congestion through a combination of public and private sector measures to improve transportation facilities and services and reduce travel demand.

Traffic Mitigation Programs: Facilities or services funded by either the public or private sector, which attempt to mitigate excessive vehicle trips during the peak commuting hours.

Transfer of Development Rights (TDR): The conveyance of development rights, as authorized by local law, to another parcel of land and the recordation of that conveyance among the land records of Montgomery County. Also see Receiving Area and Sending Area.

Transit Accessible: An area or development that is within walking distance of bus routes and/or metro service.

Transit Group Classification: An index (I to IV) classifying policy areas according to transit service availability. The higher the index, the greater the availability, providing alternatives to the automobile and allowing greater traffic congestion.

Transit Mode Share: Trips made by mass transit as a percentage of all trips being made. The peak hour is often used as a basis.

Transit Serviceable: Locations of sufficient population, employment, and/or commercial density with adequate provision for pedestrian and bicycle access, organized in a manner that enables them to be served efficiently by public transit.

Transitway: Right-of-way designated for exclusive use by transit vehicles, including heavy or light rail, or buses.

Transportation Capacity: A measurement of the amount of residential and commercial growth a planning area can sustain, based on the amount of road and transit system assumed.

Transportation Demand Management (TDM): Actions taken to reduce the number of peak hour trips in the transportation network.

Tree: A large, woody plant having one or several self-supporting stems or trunks and numerous branches that reach a height of at least 20 feet at maturity.

Tree Save Plan: A plan showing areas of tree preservation subject to the review and approval of the Planning Board pursuant to the provisions of the 1989 Montgomery County Tree Legislation.

Tree Save Area: That area of a lot or parcel on which existing trees are to be preserved.

Trip Assignment: A transportation analysis, used with trip generation and trip distribution, to estimate the routes travelers will take and the amount of time needed to complete their trip. A computer model assigns trips to the quickest route, but these paths may change as roads in the network become congested and slow down.

Trip Distribution: An estimation of the number of trips during a particular time and for a particular purpose between each origin and destination pair.

Trip Generation: The number of one-way trips to or from a location as a result of land use activity at that location.

Ultimate Land Use: Future land use as prescribed by the most recent master plan assuming total implementation of that plan. In actual practice, development rarely exceeds 80 percent of ultimate land use.

Urban Boulevard: The major street or streets in a CBD, with well-defined streetscape consisting of wide sidewalks, a distinct type of street tree, with wide, clearly marked pedestrian crossings.

Urban Street: CBD streets which accommodate a mix of users and uses and are enhanced with streetscape elements.

Vehicular Capacity: A measure of the maximum number of vehicles that can pass through a given road segment, or intersection, during a given time period under prevailing roadway conditions. Also see Level of Service.

Washington Metropolitan Area Transit Authority (WMATA): The regional agency that is responsible for constructing and operating the Metrorail rapid-rail system and operating Metrobus service in the Washington area.

Wedges and Corridors: A pattern of development set by the 1964 general plan for Montgomery and Prince George's Counties that divides the region into a series of developed corridors along major roadways, and low density, residential or agricultural wedges in the intervening areas.

Wetland: An area that is inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

Wildlife Habitat: An area which supplies the factors (i.e. food, cover, water, etc., necessary for the existence and propagation of wildlife.

Zone Data: Data for transportation analysis that describes the character of an area by number of households, or amount of employment. This data is supplemented by parking costs, land area, access and egress times, and other relevant information.

Zoning: Zoning regulates the use of land. All land in Montgomery County is zoned. Within each zone, the County Zoning Ordinance permits certain uses by right and permits others conditionally. The Ordinance also excludes certain uses from each zone. The division of a municipality or county into districts for the purpose of regulating the use of private land. These zones are shown on an official atlas which is part of the Zoning Ordinance. Within each of these districts, the text of the Zoning Ordinance specifies the permitted uses, the bulk of buildings, the required yards, the necessary off-street parking, and other prerequisites to obtaining permission to develop.

Maryland law permits the use of two types of zones, Euclidean and floating zones. There are important distinctions between the two which affect the manner in which they can be employed.

Euclidean Zones: A Euclidean zone is a zone that contains fixed standards. Certain uses are permitted in these zones, but they are subject to rigid requirements such as: lot size; front, side, and rear setbacks; and maximum height. Application for a Euclidean zone may be made either by the property owner or by the government, and thus it may be applied by sectional map amendment or local map amendment (see below).

Maryland law provides that a local map amendment rezoning to a Euclidean zone is permissible only if there has been a change in the planned character of the neighborhood since the last comprehensive rezoning or a mistake in the original zoning. All zones in Montgomery County that are not identified as floating zones (see next paragraph) are Euclidean zones.

Floating Zones: A floating zone is more flexible and similar to special exceptions in that the County Council must find the proposed zone compatible with the surrounding area and meets the purposes of the zone. Findings of change or mistake, required for granting a Euclidean zone, do not have to be made before the application for a floating zone can be granted.

All floating zones require Planning Board approval of a site plan for development of the property prior to the

issuance of a building permit.

Zoning Map Amendment: A change to the regulations of a given zone or zones, as stated in the text of the Zoning Ordinance.

Zoning Text Amendment: A change to the regulations of a given zone or zones.

APPENDIX B

*DESCRIPTION
OF
THE
BACKGROUND
TRANSPORTATION
SYSTEM*



MASTER PLAN TRANSIT RECOMMENDATIONS

The following is a summary of the relevant transit and HOV recommendations from proposed and approved and adopted master plans. The recommendations of these plans are included in the background transportation system for the Transitway and HOV Network Master Plan. The Appendix includes a summary of the following plans:

Aspen Hill Staff Draft Master Plan (1993)

Bethesda Preliminary Draft Sector Plan (1992)

Clarkesburg Master Plan Preliminary Draft Plan (1992)

Eastern Montgomery County Planning Area Master Plan (1981)

Friendship Heights Sector Plan (1974)

Gaithersburg Vicinity Master Plan (1985)

Georgetown Branch Master Plan Amendment (1990)

Germantown Master Plan (1989)

Glenmont Transit Impact Area Sector Plan (1978)

Kensington-Wheaton Master Plan (1989)

North Bethesda-Garrett Park Master Plan (1992)

Potomac Subregion Master Plan (1989)

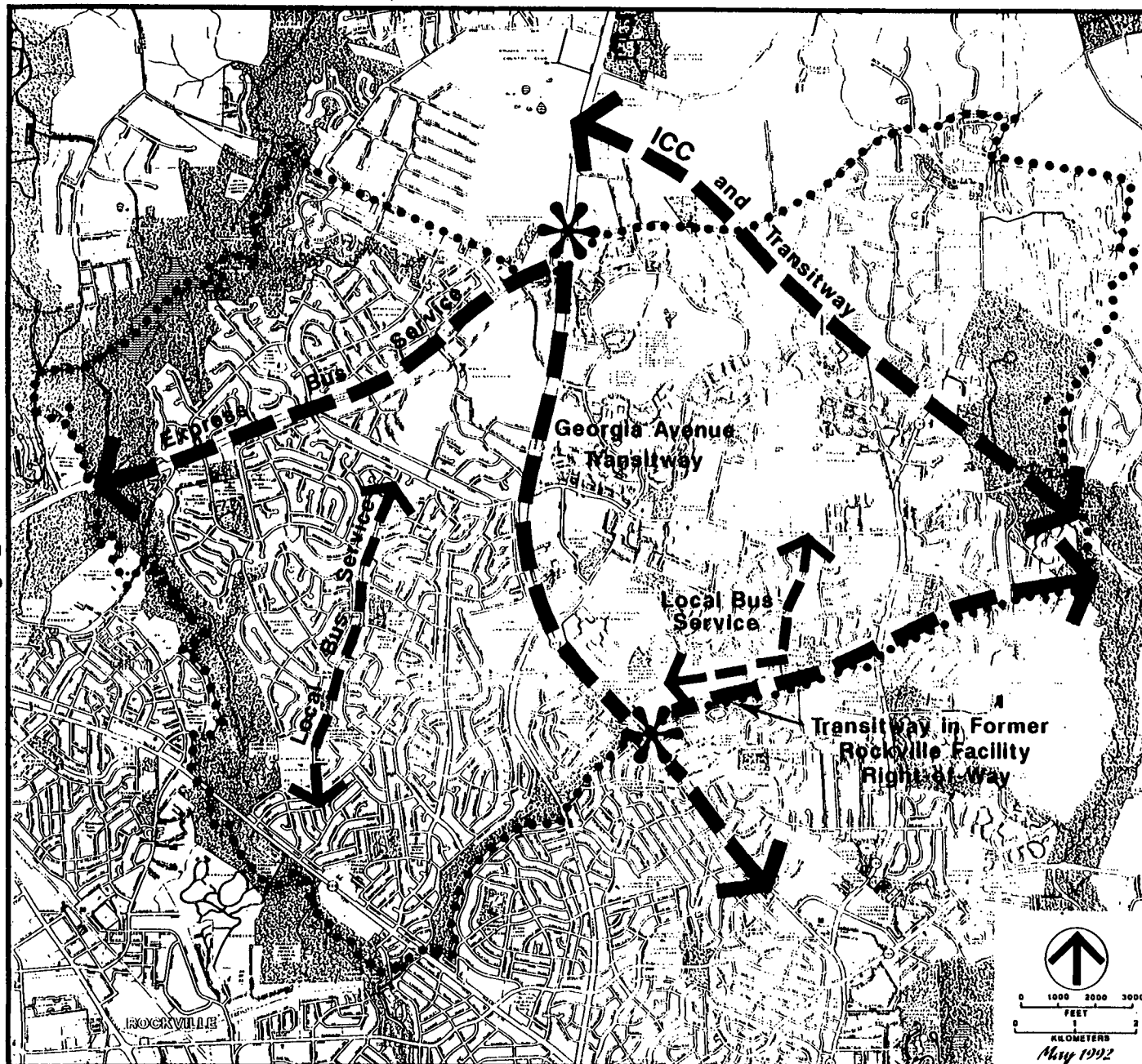
Shady Grove Study Area Master Plan (1990)

Silver Spring Final Draft Sector Plan (1992)

ASPEN HILL STAFF DRAFT MASTER PLAN (1993)

The transportation objective of the Staff Draft Master Plan of Aspen Hill is to ensure a circulation system that minimizes the impact of traffic growth on residential communities in Aspen Hill, helps reduce auto-dependency, has sufficient transportation capacity for the land use recommendations proposed in the Master Plan, and is consistent with regional plans and policies. This plan assumes that the Intercounty Connector (ICC) will be constructed within the alignment of the right-of-way for the ICC shown on the 1970 Approved and Adopted Master Plan for Aspen Hill. Specific recommendations of the plan are as follows:

- expand bus service to provide coverage to neighborhoods where residents do not have safe and convenient access to the nearest bus line
- provide feeder bus service from Aspen Hill to the Glenmont Metrorail station when service begins
- construct a transitway in the median of Georgia Avenue between the northern and southern ends of the planning area
- include bus lanes and perhaps carpool lanes within the Intercounty Connector right-of-way when the ICC is constructed
- reserve the former Rockville Facility right-of-way for a future east-west transitway between the ICC and Georgia Avenue
- establish a transit assistance center in Aspen Hill to help reduce auto-dependency
- any additional development or redevelopment of the Vitro site should include rideshare program and enhanced transit service



STAFF DRAFT

A Master Plan for the Communities of
Aspen Hill
 Planning Area

PROPOSED PUBLIC TRANSPORTATION SYSTEM IMPROVEMENTS

— LOCAL TRANSIT SERVICE



COMMUTER PARKING



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FEET

0 1 2
KILOMETERS

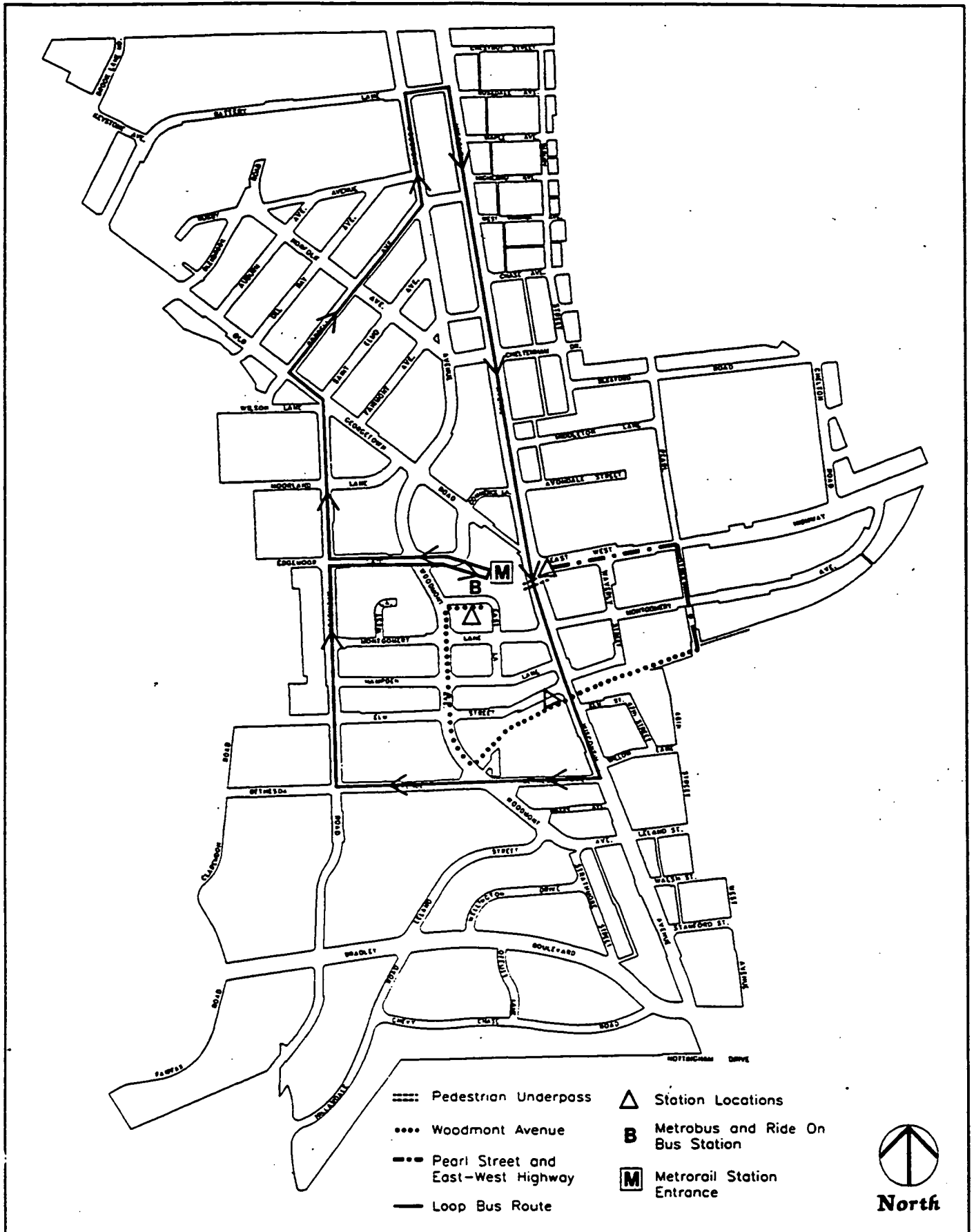
May 1992

BETHESDA PRELIMINARY DRAFT SECTOR PLAN (1992)

The recommendations of the Bethesda Transportation Plan are designed to increase the peak-hour commuter use of transit, carpools, bicycling and walking by Bethesda CBD employees. These modes are not used to the extent they could be and yet, they offer significant potential for supporting needed jobs and housing without creating additional traffic congestion:

- develop a Transportation Management District that employs techniques to increase the fraction of morning peak period work trips made by people using transit and carpools to existing and new jobs to 40 percent
- expand bus service in the CBD, including the possible development of a shuttle bus loop for circulation
- develop a light-rail connection to the Silver Spring CBD using the Georgetown Branch right-of-way, with a terminal located in the Bethesda Metro core
- institute an enhanced, constrained parking policy to support the 40 percent transit and carpool use goal

TRANSIT RECOMMENDATIONS

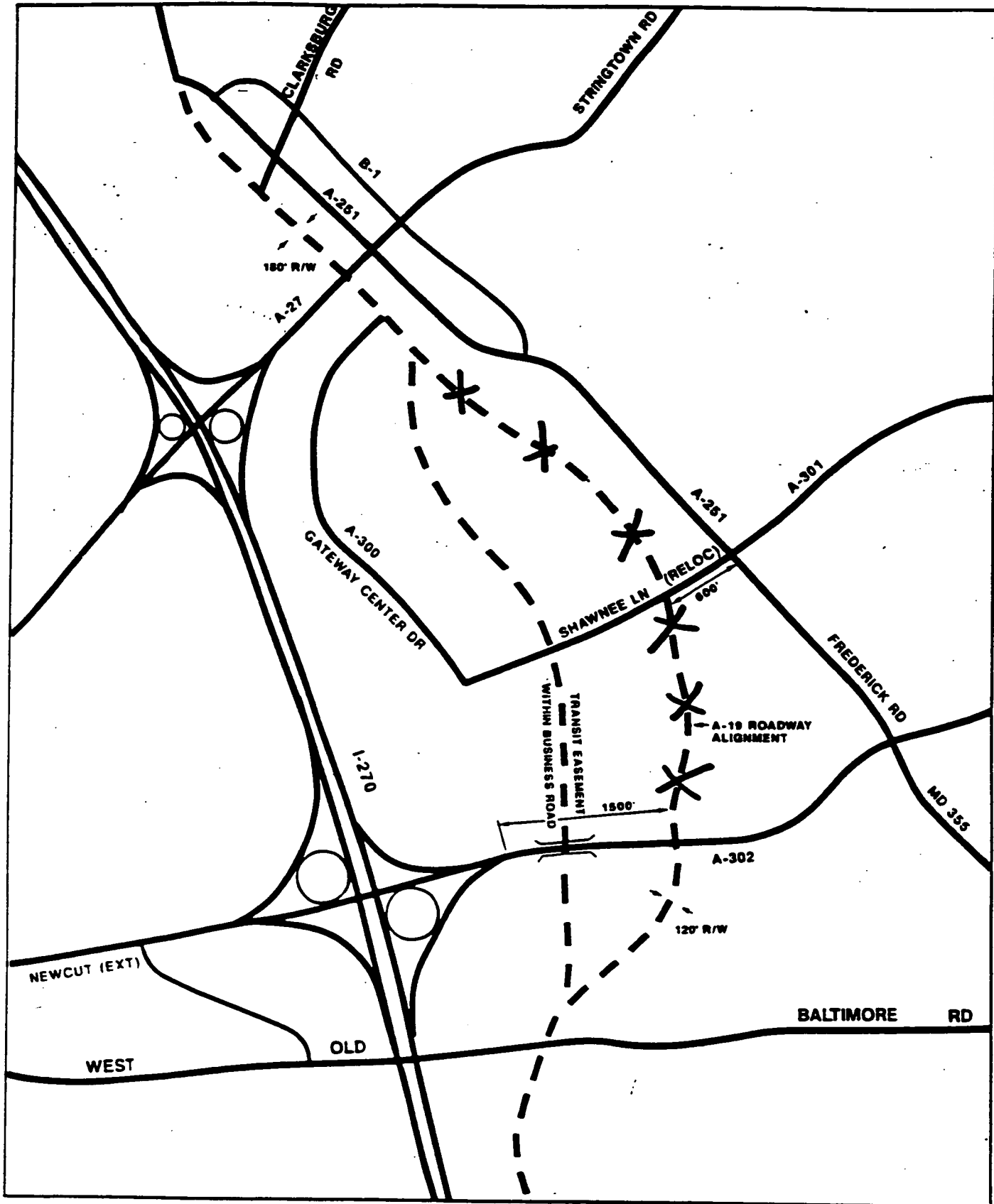


CLARKSBURG MASTER PLAN & HYATTSTOWN
SPECIAL STUDY AREA
PRELIMINARY DRAFT PLAN (1992)

This plan proposes a system of highways, transit routes, and bike-ways/pathways to support future development. Major emphasis is placed on transit in accord with plan objectives to make Clarksburg a transit serviceable community. The transit related recommendations of the plan include:

- an exclusive transitway, which is part of a larger regional transit network. The transitway could be contained within the entire length of the A-19 (Observation Drive Extended) right-of-way from Germantown to M-83. The transitway joins M-83 and then I-270. North of Comus Road, the transitway's recommended location is within the I-270 right-of-way
- regional transitway linking the study area to the City of Frederick to the north and the Shady Grove Metro station to the south
- high quality regional and local bus routes linking Clarksburg's developed areas to the Boyds MARC station; eventually, longer distance bus connection service from Clarksburg should be provided along I-270 and M-83
- improved MARC commuter rail service
- to foster the formation of carpools and to provide park-and-ride to transit stations and down-County, park-and-ride lots of 50 to 300 spaces should be combined with shopping center parking lots in the neighborhood centers

PREVIOUS PLANNING BOARD DECISION: ELIMINATION OF A-19 OPTIONAL ALIGNMENT 1



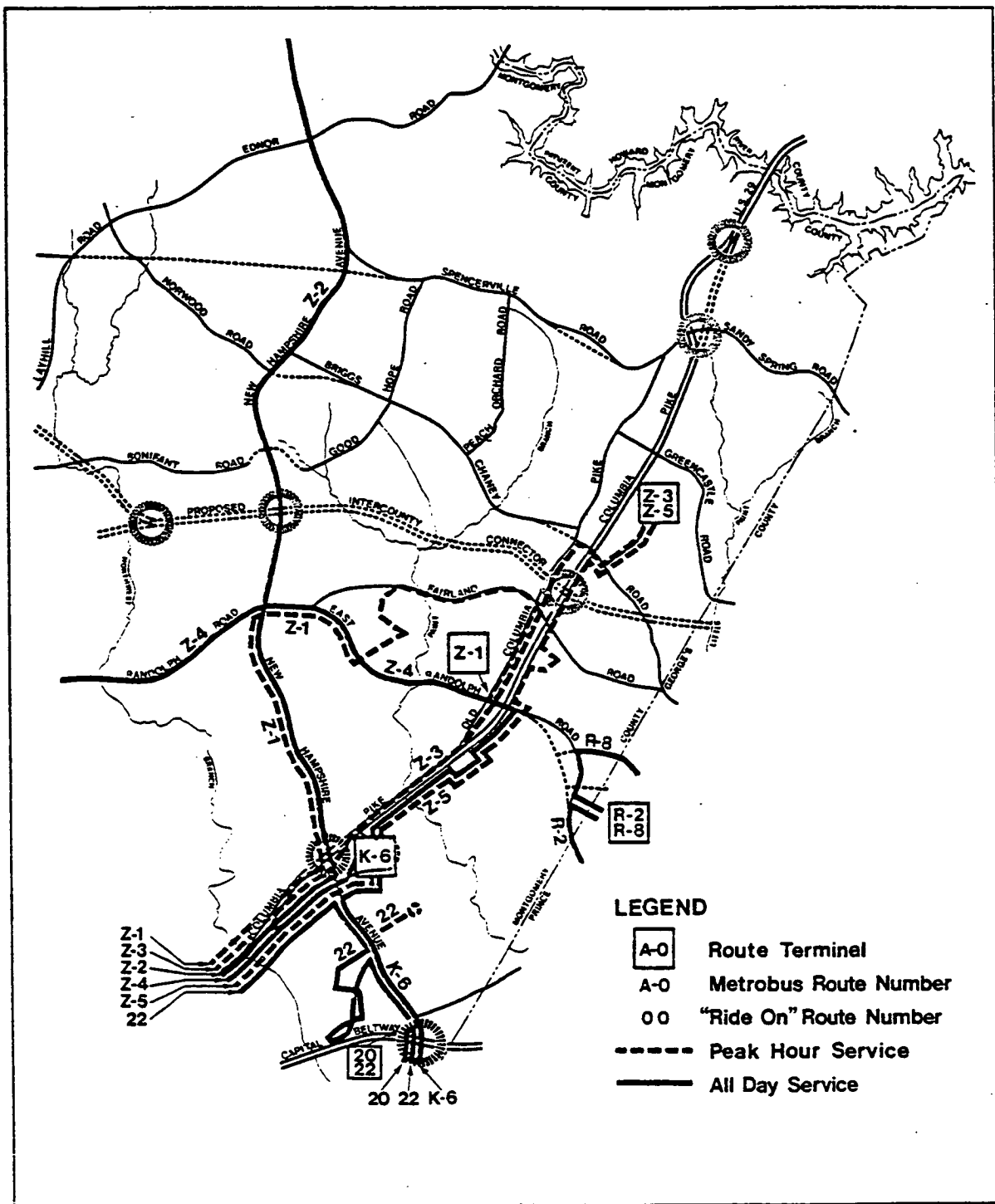
EASTERN MONTGOMERY COUNTY PLANNING AREA

MASTER PLAN (1981)

A comprehensive amendment to this master plan is scheduled to be completed in 1995.

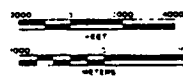
A fundamental aim of the 1981 Eastern Montgomery County Planning Area Master Plan is to reduce automobile dependence. To do so, the master plan recommends a pattern of land use that places major development where alternative travel modes to the automobile can be used. Such alternative modes include public transit, ride-sharing, carpooling, vanpooling, riding bicycles, or walking. The master plan recommends that, with the development of a transit serviceable base, the appropriate level of transit service be provided. Specifically, this master plan recommends:

- locating public fringe (commuter) parking lots where auto occupants can form carpools or transfer to buses
- operating express bus service linking these fringe parking lots with the Silver Spring and Glenmont Metro stations
- operating express bus service in the US 29 and New Hampshire Avenue corridors. Fringe parking facilities should be constructed at strategic locations along US 29 to encourage both transit ridership and ridesharing and to help maintain a balance between the projected traffic and the design capacity of the highway network
- providing dial-a-ride or minibus service connecting communities with the fringe parking lots, shopping and employment centers and other facilities



**EASTERN
MONTGOMERY
COUNTY**

BUS ROUTES, 1982



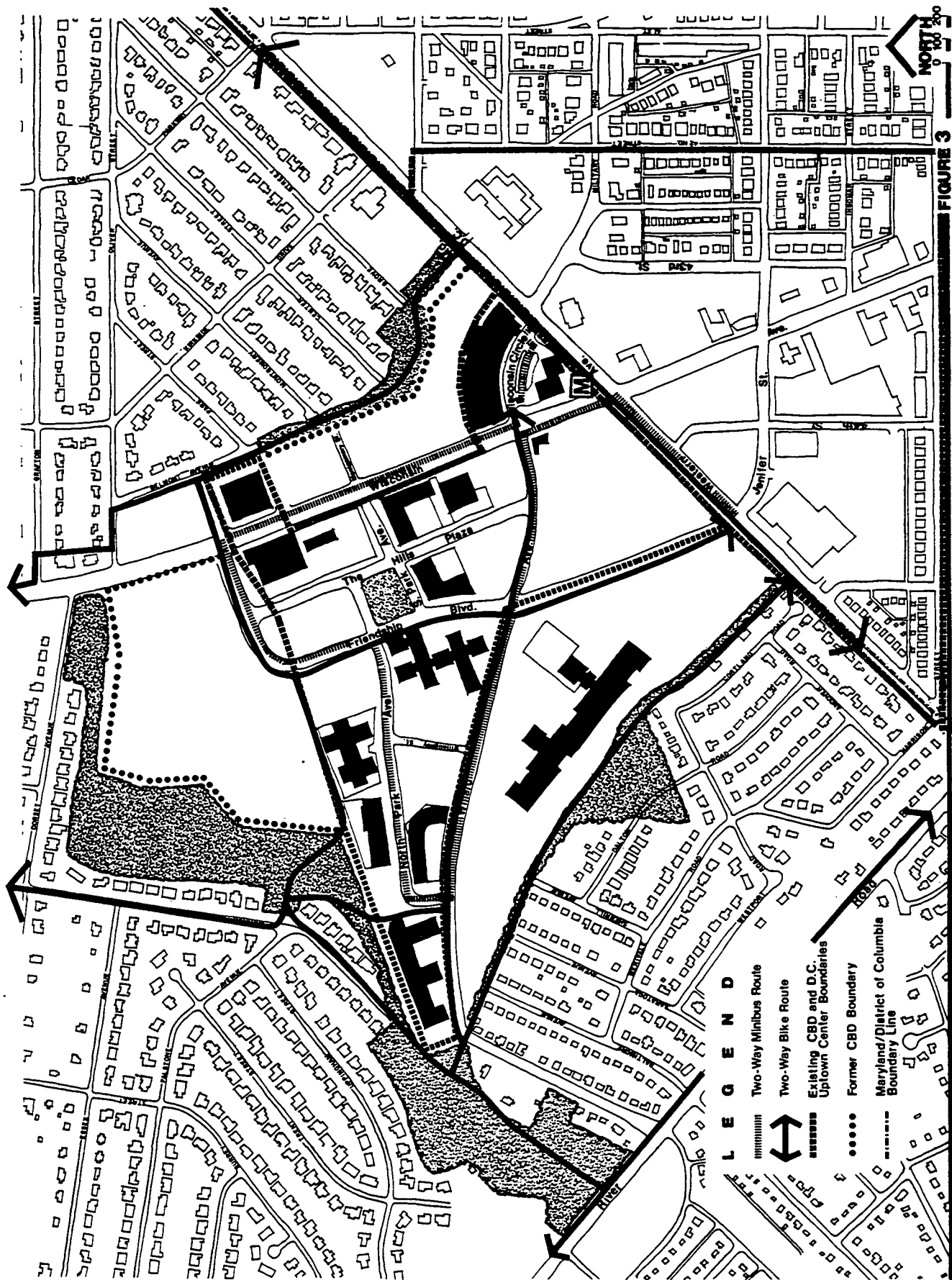
NOVEMBER
1981

43

FRIENDSHIP HEIGHTS SECTOR PLAN (1974)

The primary transportation goal of the Sector Plan is to provide an efficient, economical and safe transportation network which will serve the specific area and the entire metropolitan region. The recommendations to encourage transit ridership in Friendship Heights are as follows:

- provide direct access to the transit station from the highest density activities
- give preferential treatment for bus movement to and from the transit station
- develop two types of bus feeder service: operate trunk line service, utilizing standard transit coaches on the major arterial routes only, and use small vehicles (minibus) only for routes on residential streets
- encourage development of local-service, fine-grained, small-vehicle transit loop to connect local residential and office buildings with major shopping facilities, in conjunction with the development of a pedestrian network
- establish a south portal entrance to the Metro station in the District of Columbia



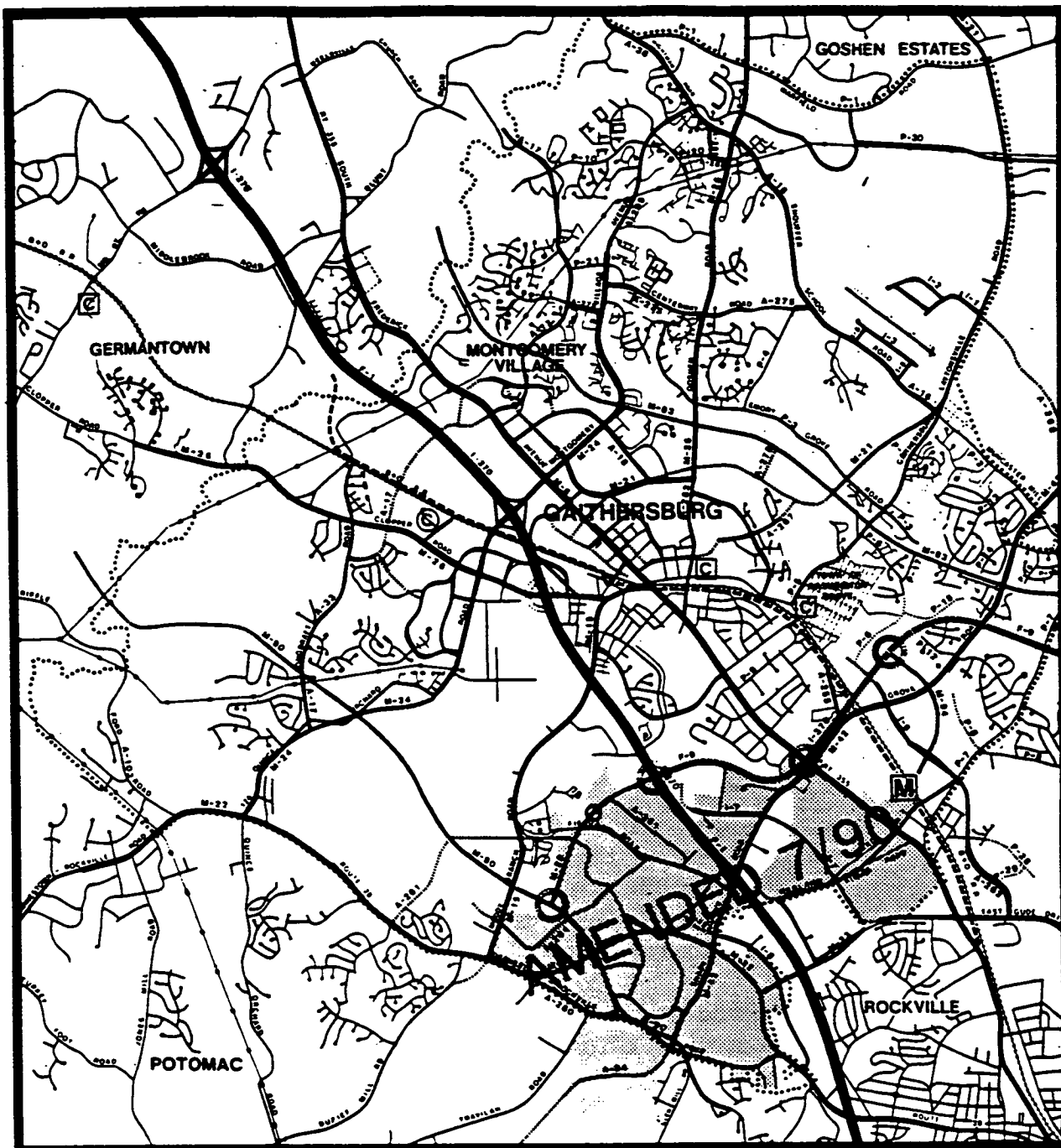
BIKE & BUS ROUTES

FRIENDSHIP HEIGHTS

GAITHERSBURG VICINITY MASTER PLAN (1985)

The intent of this plan is to ensure convenience, accessibility and flexibility with regard to the area's circulation system in the following manner:

- develop a highway network in coordination with the existing regional network; specifically, the Plan supports the construction of I-370 linking the Shady Grove Metro station with I-270; the Intercounty Connector from Great Seneca Highway to the Baltimore-Washington Parkway in Prince George's County; and the extension of Great Seneca Highway from Middlebrook Road in Germantown south to Ritchie Parkway at MD 28
- develop quality public transportation systems and advance private ridesharing and carpooling programs to reduce dependence upon single-occupancy automobile commuting; specifically, the Plan recommends that MARC commuter rail service be continued and that an additional station be provided at Metropolitan Grove Road; retain a right-of-way for future bus or rail extension through Gaithersburg to Germantown, and possibly to Clarksburg
- encourage adequate residential and employment densities to support efficient public transit and carpool/vanpool programs
- encourage the provision of bikeways for commuter as well as recreational uses
- encourage the development of public and private pathways for pedestrian movement in concert with road design and construction



TRANSPORTATION PLAN

- Planning Area Boundary
- Transit Easement
- M** Metro Station
- C** Commuter Rail Station-Existing
- ©** Commuter Rail Station-Recommended

NOTE: See Text, Actual Alignment May Differ

	Existing	Proposed
Freeway (F-1)		
Major (M-1)		
Arterial/Industrial (A-1)		
Primary (P-1)		
Interchange		

APPROVED & ADOPTED GAITHERSBURG VICINITY MASTER PLAN
Montgomery County Maryland

January, 1985

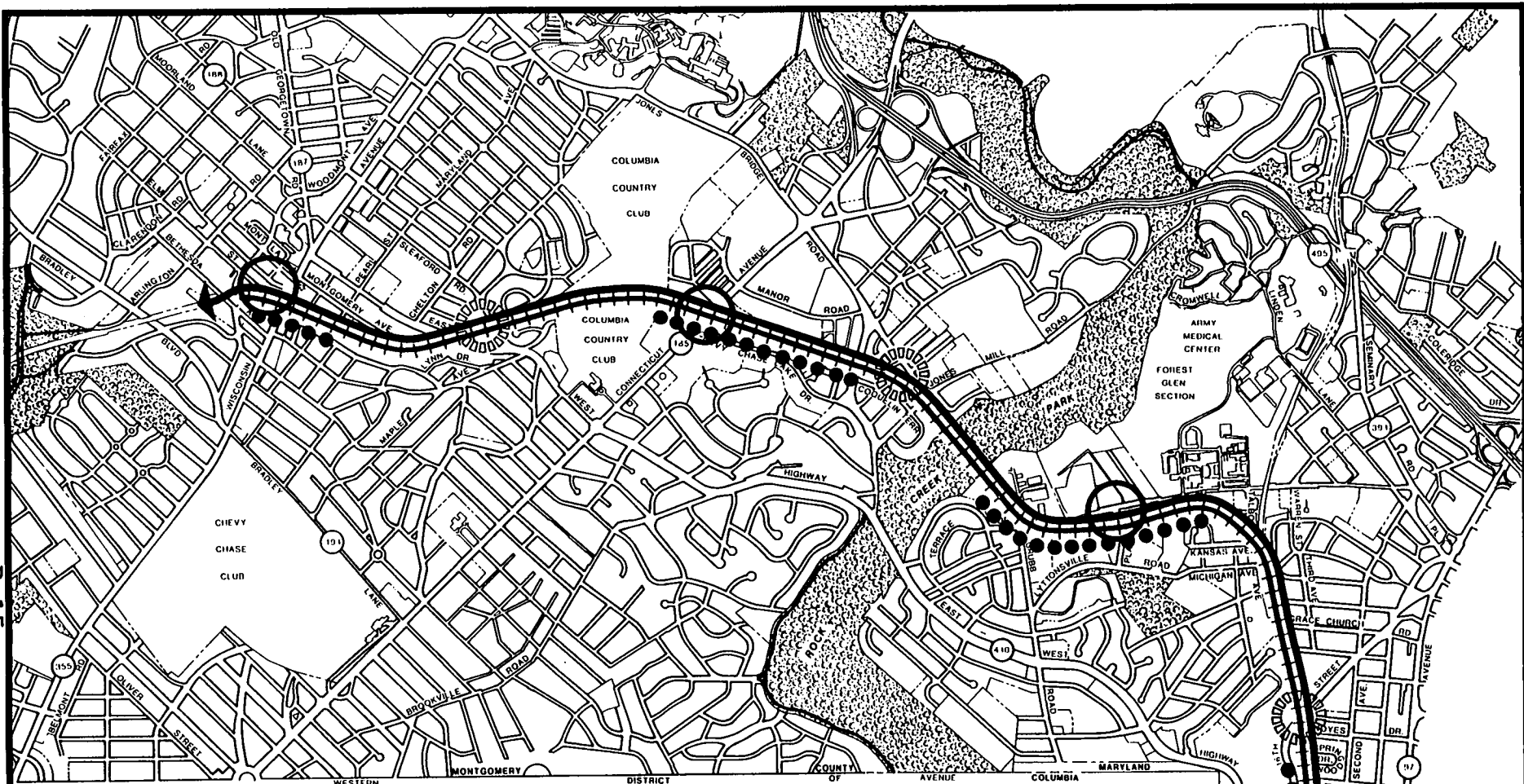


Fig. 27

GEORGETOWN BRANCH MASTER PLAN AMENDMENT (1990)

This Plan amends the Georgetown Branch Master Plan Amendment of November 1986 and focuses on the suitability of trolley/trail use for the Georgetown Branch right-of-way. The Plan designates the Silver Spring and Bethesda Trolley and the Capital Crescent Trail as suitable uses for the 4.4 mile portion of the Georgetown Branch right-of-way between Bethesda and Silver Spring. Specifically, the Plan recommends the following:

- the designation of the Georgetown Branch right-of-way as suitable for use as the Silver Spring & Bethesda Trolley and the Capital Crescent Trail between Silver Spring and Bethesda
- that five trolley stations between Bethesda and Silver Spring be designated. Four of these should be 'express stations' (Bethesda Terminal, Chevy Chase Lake/Connecticut Avenue, Lyttonsville, and Silver Spring Terminal) operating at all times; the other one (Spring Street Station) should be a 'local' station, operating only during non-rush-hour day, evening, and weekend hours. This Plan does not deal with the question of specific station design, but recommends that detailed designs be reviewed at appropriate subsequent stages through the Mandatory Referral Process
- that the southern entrance to the Bethesda Metrorail Station be connected to the trolley facility to provide a convenient, direct transfer from the Bethesda Terminal Station to the Metrorail station
- that the Bethesda Station design include an extension of the concourse through the platform area in order to provide adequate trail width and safety
- that an additional 'kiss-and-ride' area be designated on the east side of Connecticut Avenue
- that the trolley crossing of the Metropolitan Branch be a below-grade tunnel or underpass
- that any additional right-of-way needed for future, possible double track configuration along the Metropolitan Branch be identified for future dedication through the subdivision process



STATION LOCATIONS



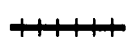
Station Location



Future Station Location



Double Track Section



Single Track Section



Trail

JAN. 1990



FIGURE

16

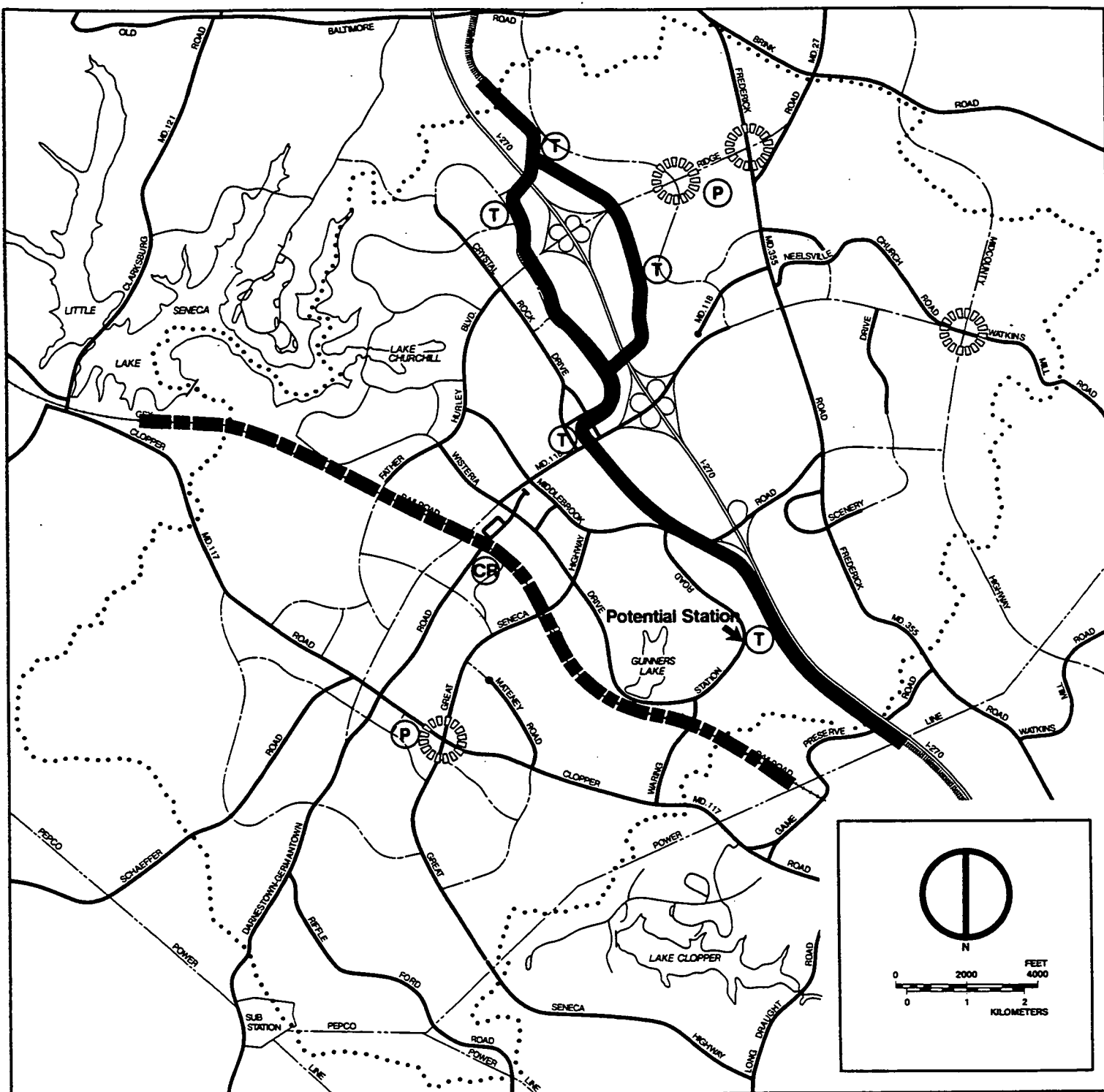
Georgetown Branch Trolley/Trail
Bethesda • Chevy Chase • Silver Spring

Trail portion parallel to trolley ends at Spring Street.

GERMANTOWN MASTER PLAN (1989)

The intent of this plan is to ensure convenience, accessibility, and flexibility so that Germantown may become a community with transit-serviceable land uses and with a network of highways that provides access to the regional highway system. Specifically, the plan recommends the following:

- develop a high quality transportation system and improved private ride-sharing and carpooling programs to reduce dependence upon single-occupancy automobile commuting
- support efficient and accessible public transit and carpool/vanpool programs, with particular emphasis on non-peak public transit service to meet needs of employment corridor employees
- establish two transit alignments for the Germantown Area which would allow transit to serve employment and residential uses on the east and west side of I-270, as well as the Town Center. These transit easement alignments might include at-grade crossings of major highways such as Middlebrook Road (M-85), MD 118 (M-61), and Father Hurley Boulevard (M-27). Five transit stations are recommended at the locations shown on the map. Parking facilities are recommended at each facility
- expand the parking facilities at the commuter rail station in Germantown to enhance the use of commuter rail service
- establish a shuttle bus service to increase accessibility for employees going to and from the transit stations
- develop park-and-ride lots at a site adjacent to the regional shopping mall site in Neelsville Village and along Clopper Road near its intersection with Great Seneca Highway, adjacent to the Neelsville Village Center



Existing and Proposed Transit Facilities

- Commuter Rail
- * Corridor City Transit Easement Alignment
- Commuter Rail Station
- Park-N-Ride Location
- Proposed Transit Stations

 **Comprehensive Amendment
to the Master Plan for Germantown**

Montgomery County, Maryland

 The Maryland-National Capital Park and Planning Commission

* These and other alternative Alignments are being studied as part of the Corridor Cities Transit Easement Study-See Master Plan and Figure 39.

GLENMONT TRANSIT IMPACT AREA SECTOR PLAN (1978)

A basic goal of the transportation plan is a balanced and coordinated network of transportation facilities which improve mobility within the community and increase accessibility to and from regional activity centers. The following are specific transportation objectives for achieving this goal:

- integrate the Metro rapid rail facilities into the fabric of the existing community with a minimum of disruption
- improve transit services to satisfy a wide range of local community needs including regional, intermediate and neighborhood bus service
- improve major roads, where necessary, to assure the continuation of adequate traffic capacity and level of service
- promote policies to protect neighborhoods from intrusions of commuter parking
- develop a pedestrian and bicycle circulation network to encourage alternatives to the auto for short local trips

KENSINGTON-WHEATON MASTER PLAN (1989)

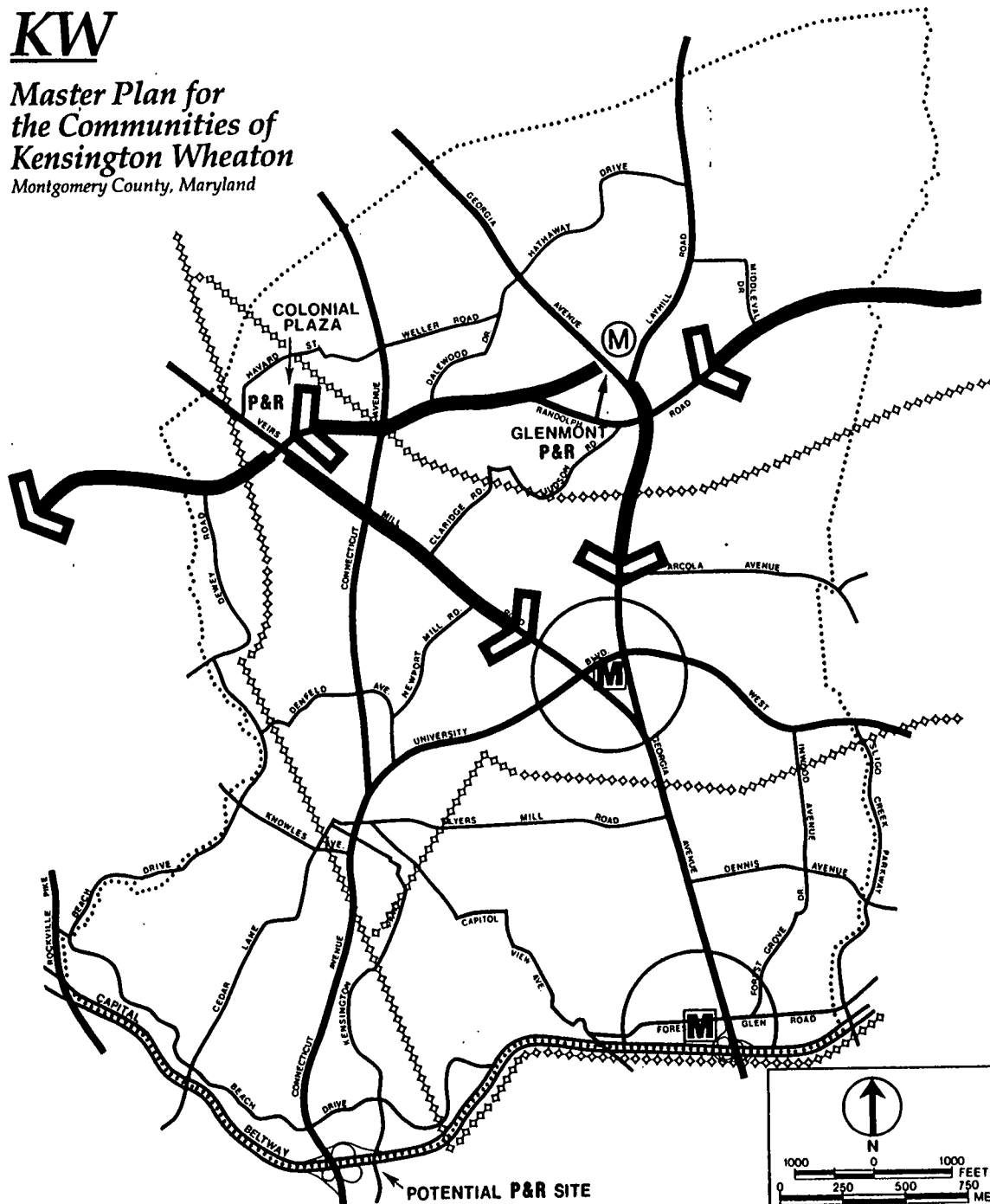
The transportation objective of the Kensington-Wheaton plan is to establish a transit system in the area which provides a mixture of rapid, intermediate, and feeder transit services that will be an effective alternative to driving. Specifically, this plan recommends:

- completing the Glenmont Metrorail route to provide a north-south rapid transit route for the Kensington-Wheaton area
- investigating the potential for east-west rapid transit routes, both within the Kensington-Wheaton area and outside, yet connected to the area such as the Georgetown Branch light rail trolley and the Intercounty Connector
- encouraging the expansion of service on the MARC line and the development of other improvements that will render commuter rail safer and more reliable
- providing a feeder bus transit service for Metrorail stations at Forest Glen, Wheaton and Glenmont
- supplementing the bus transit feeder system with the provision of park-and-ride facilities that would be collection points for transit as well as carpools and vanpools

KW

Master Plan for the Communities of Kensington Wheaton Montgomery County, Maryland

B-21



Park and Ride Lots

- PLANNING AREA BOUNDARY
- ▬ PARK & RIDE SHUTTLE ROUTE
- ◊◊◊◊ METRO SERVICE AREA
- P&R PARK & RIDE LOT
- ▣ METRORAIL STATION
- METRO AND PARK & RIDE
PRIMARY IMPACT AREA
(2000 FOOT RADIUS)
- Ⓜ PLANNED METRORAIL STATION

Illustration 5-6





The Maryland-National Capital Park & Planning Commission

NORTH BETHESDA-GARRETT PARK MASTER PLAN (1992)

This plan recommends additional roadway capacity, together with new transit services and demand management programs. Specifically, the plan makes the following recommendations:

- provide a balanced transportation system to serve the recommended land use plan
- encourage transit accessible land use patterns
- HOV lanes on I-270
- increase the non-auto-driver modes for commuting
- expand the roadway network to provide improved circulation and access to existing, approved and future development
- create a transportation management district around Metro-rail and Rock Spring Park; this management district could implement traffic mitigation programs, increase or institute parking charges or decrease parking supply; hold fare increases to the minimum
- construct the Montrose Parkway from Montrose Road to Veirs Mill Road and retain the remainder of the Rockville Facility right-of-way for a possible future transitway
- major expansions to the public transportation system in North Bethesda are needed to provide alternatives to driving and to encourage transit use. The following recommendations should be included in any future plans:
 - running every northbound train on the Metro Red Line all the way to Shady Grove
 - providing increased local bus services as feeders to the Metrorail stations and to connect the stations with employment locations
 - Providing a MARC station in the northeast corner of the Montrose Crossing site near the intersection of Chapman and Bou Avenues
 - providing a high capacity transit connection between the Grosvenor Metrorail Station and Montgomery Mall via Rock Spring Park.

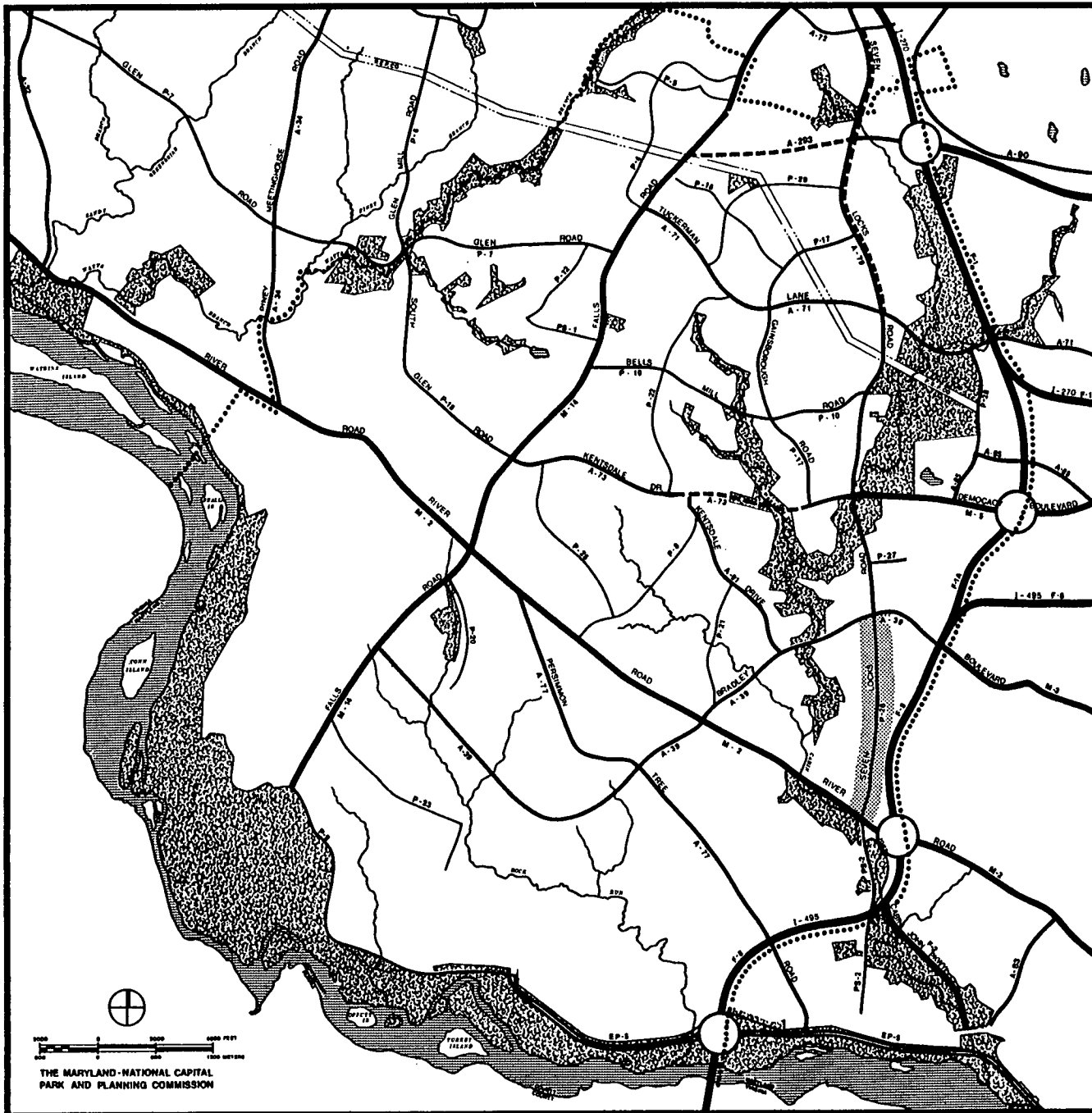


-  North Bethesda Transitway
 I-270 HOV Lanes
 Montrose Parkway Transitway (Future)
 Proposed Montrose Parkway (Future)

 The Maryland-National Capital Park and Planning Commission

POTOMAC SUBREGION MASTER PLAN (1980)

The Potomac Subregion Master Plan recommends a limited number of roadway improvements and changes to the transit system only when the Rockville Metrorail station opens. The goal of the transportation section of the Plan is to retain the semi-rural character of the Sub-region through a limited number of roadway improvements, even though congestion will occur. The Plan does recommend that new and expanded bus service to serve Potomac residents traveling to the Rockville Metrorail station when it opens.



Master Plan FOR THE Potomac Subregion

POTOMAC-CADIN JOHN AND VICINITY P.A. 29

RECOMMENDED HIGHWAY IMPROVEMENT








- Freeway
- Major Street
- Arterial Street
- Primary Street
- Proposed 2-Lane Roadway
- Proposed 4-Lane Roadway
- Proposed Widening 4-Lane Roadway
- Planning Area Boundary

Shaded area has been amended. See Amendment 3 in the Appendix.

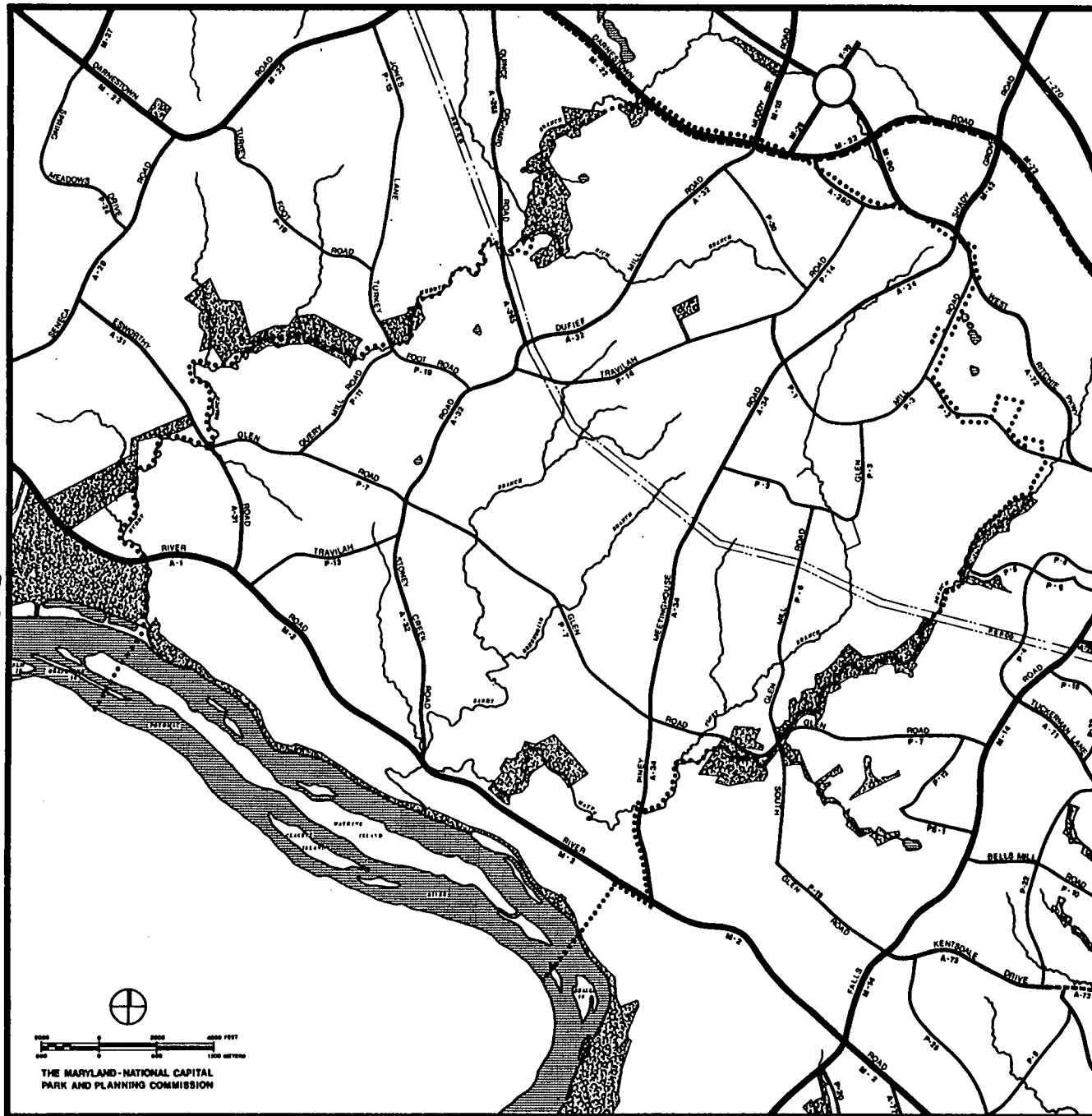
Master Plan FOR THE Potomac Subregion

TRAVILAH AND VICINITY P.A. 25

RECOMMENDED HIGHWAY IMPROVEMENT

-  Freeway
-  Major Street
-  Arterial Street
-  Primary Street
-  Proposed 2-Lane Roadway
-  Proposed 4-Lane Roadway
-  Proposed Widening 4-Lane Roadway
- Planning Area Boundary

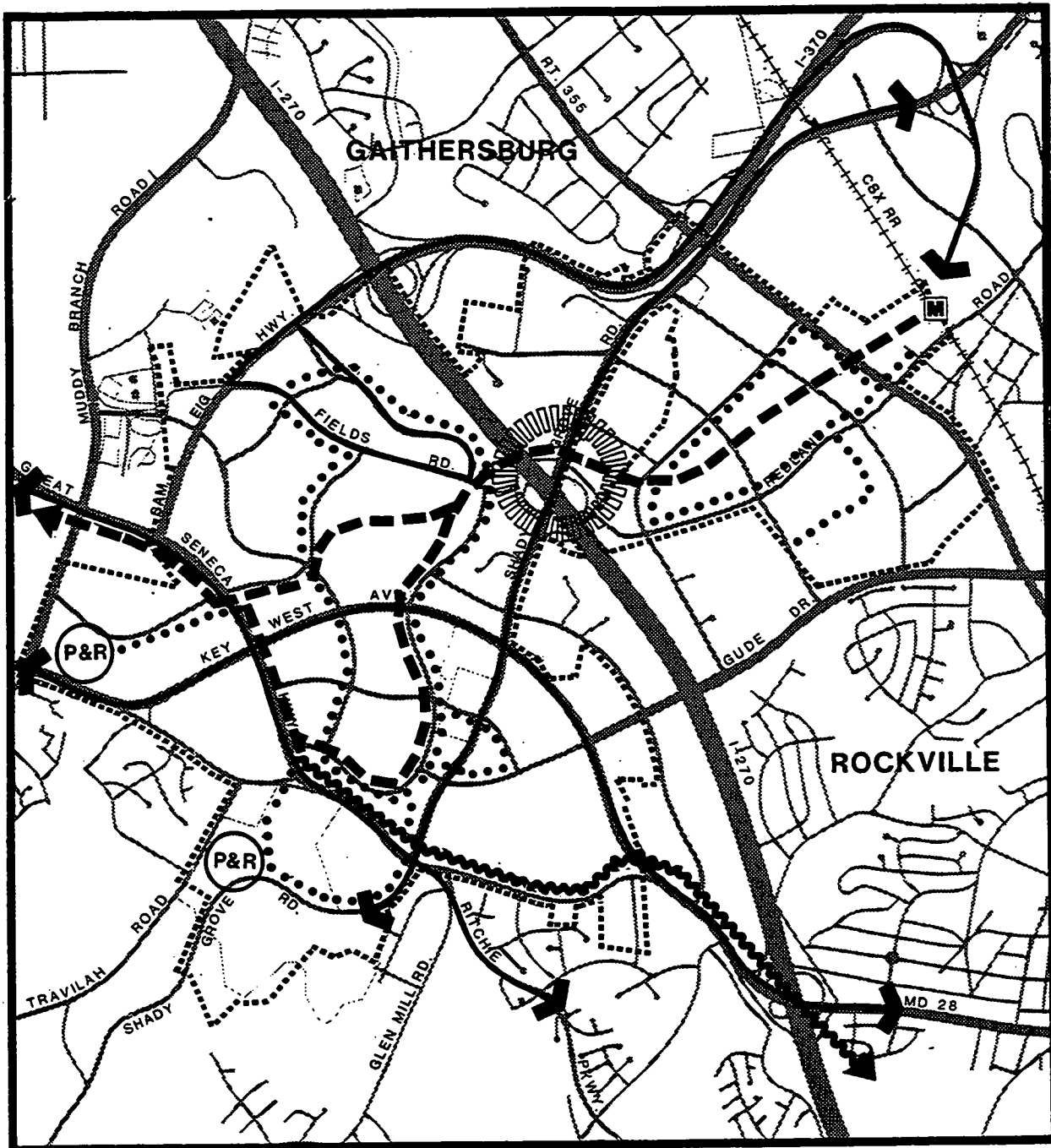
B-2.7



SHADY GROVE STUDY AREA MASTER PLAN (1990)

The transportation plan of the Shady Grove Study Area Master Plan includes a system of highways, access roadways, transit routes, and bike-ways/pathways to form an integrated network of access throughout the area. Major emphasis is placed on exclusive transit rights-of-way through the area. Specifically, the transportation portion of the plan recommends the following:

- develop quality public transportation systems on exclusive rights-of-way to reduce dependence upon single-occupancy automobile commuting
- encourage development of a public/private partnership for implementation of the exclusive transitway facilities serving the planning area
- encourage the founding and operation of a transit management organization in the study area to assist in monitoring and managing traffic conditions
- encourage adequate residential and employment densities to support efficient public transit and carpool/vanpool programs
- encourage the provision of bikeways for commuter, as well as, recreational uses
- encourage the development of public and private pathways for pedestrian movement in concert with road design and construction



TRANSIT PLAN

— Northern Transitway and
LSC Transit Spur
Right-of-Way (SeeText)

..... Neighborhood Bus Loop
Illustrative Only

— Regional Bus Network



Exclusive Bus
R.O.W. Connection

P&R

Future Commuter
Parking Lots



Southern Transit
Right-of-Way
(Under Study)



Study Area Boundary

APPROVED AND ADOPTED

SHADY GROVE STUDY AREA PLAN
MONTGOMERY COUNTY, MARYLAND

JULY 1990



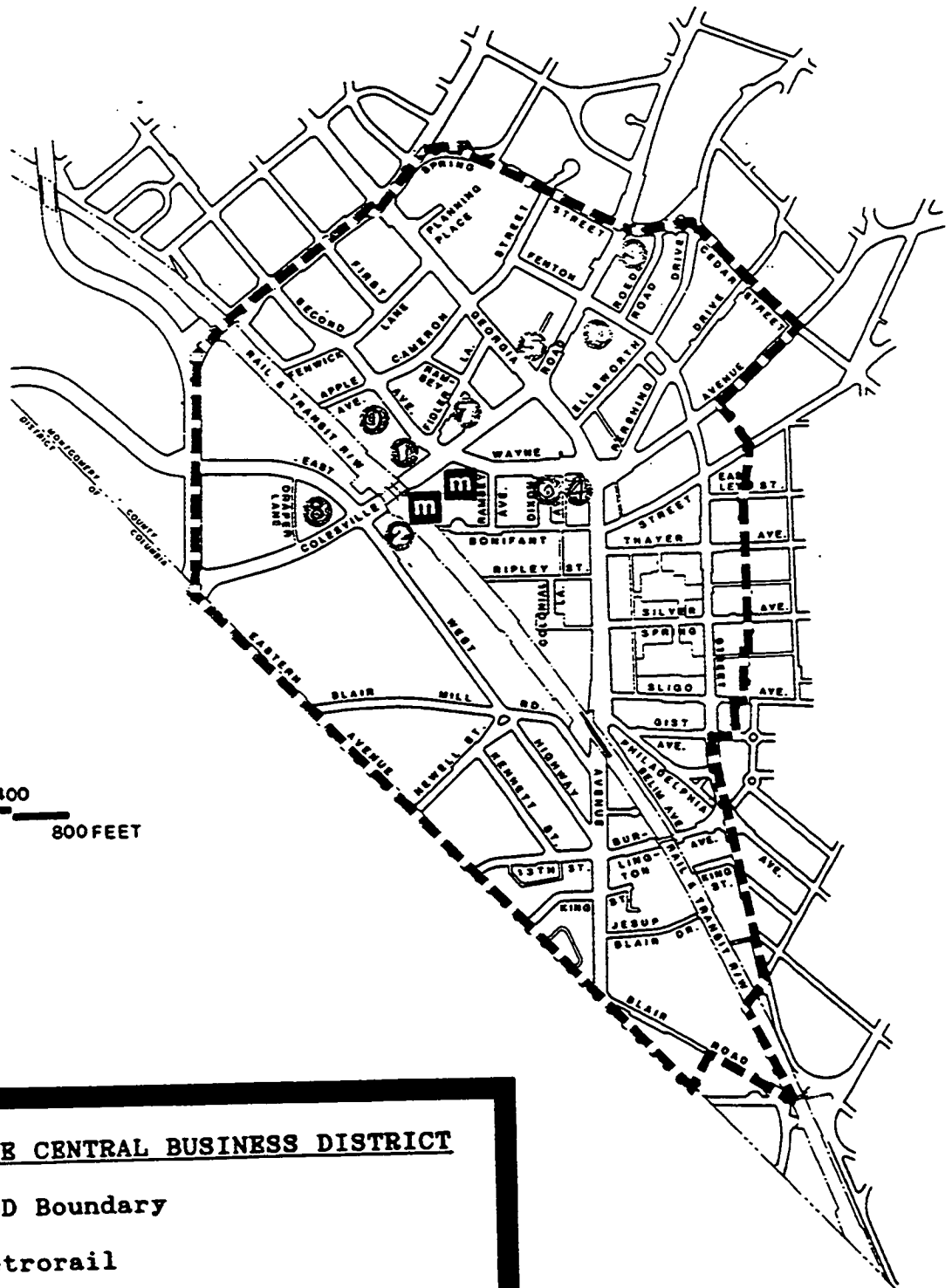
NORTH

Fig. 7.1

SILVER SPRING FINAL DRAFT SECTOR PLAN (1992)

The basic transportation objectives of the sector plan are to provide a safe environment for motorists and pedestrians, and adequate access to commercial development and community services. This plan supports (1) the extension of the Metrorail Red Line to Glenmont; (2) the expansion of bus service on US 29; (3) increased service on MARC commuter rail; and (4) a light-rail connection to Bethesda by way of the Georgetown Branch right-of-way. Specific recommendations of the plan include:

- support Transportation Management District (TMD) objectives to attain any combination of mode choices which result in an average of 54 percent of the workers driving to destinations in the CBD during the peak period. The TMD goal for future development is to reduce the percentage of workers driving to jobs in the CBD during the peak period to 50 percent
- pursue the consolidation of the transit terminal area including the relocation of the Silver Spring MARC station closer to the Silver Spring Metro station between Bonifant St. and Colesville Road to form a transportation hub
- support the development of the Georgetown Branch trolley connecting the Silver Spring transportation hub with the Bethesda Metro station. Another trolley station may be located in Silver Spring at Spring Street for service during non-peak hours
- consider reorganizing existing bus service so that all buses board and unload at common points
- consider increasing the frequencies of buses along certain designated routes
- consider operating special buses to connect Metro with retail centers and other locations in the CBD
- consider creating a special fare zone to allow employees or customers to receive passes, tokens or tickets that will allow them to board any bus operating within the CBD free of charge



Map 1. THE CENTRAL BUSINESS DISTRICT

--- CBD Boundary

m Metrorail

m Metrobus

- 1 Metro Plaza
- 2 Metro Center
- 3 Silver Spring Business Center
- 4 Plaza at Station Square
- 5 Lee Plaza
- 6 Atrium of Station Square
- 7 Silver Spring Center
- 8 Draper Triangle
- 9 Alexander House
- 10 City Place

APPENDIX C

PLANNING

BACKGROUND

SUMMARIES



Summary of ...On Wedges and Corridors; a General Plan

January, 1964

The original 1957 General Plan covered a Maryland-Washington Regional District that only included the developed areas of Montgomery and Prince George's counties. In 1959 the Regional District was expanded to its present boundaries: all of both counties except for some independent municipalities and the rural southern part of Prince George's County. "On Wedges and Corridors" was prompted by this expansion of the planning area and by the newly created metropolitan-area-wide framework of planning established by "A Policies Plan for the Year 2000," 9161, which advocated a radial corridor pattern for the metropolitan area, and the "Mass Transportation Survey Report," 1959, which showed the superiority of mass transit over private cars. By 1962 a staff draft of "On Wedges and Corridors" was printed and in 1964 a revised version was approved and adopted.

The general philosophy of the plan is to **concentrate growth in transit corridors** and an urban ring around Washington, D.C. This was an appropriate pattern in a time when the suburbs were bedroom communities and the government's intent was to concentrate Federal construction in a largely-rebuilt downtown Washington.

Key features of the Plan:

- **rapid transit**
- **efficient land use**
- **new towns and residential clusters with varied living environments**
- **greenbelts and open space preservation**

It is very much an anti-sprawl plan, envisioning high-rise corridor city centers, residential lot sizes similar to the then-current 6,000-9,000 s.f., and no large-lot subdivisions in the wedges. The only people expected to live in the rural areas (wedges) were those dependent on the rural areas for their livelihood. Major rural area uses: natural resource businesses such as farms and mines, outdoor recreation such as summer camps and golf courses, conservation uses such as wetlands and wildlife refuges, and institutional uses such as nursing homes and cemeteries.

Despite the emphasis on rapid transit to serve the corridors, the plan's transportation element has several major highways not built today. Major east-west highways not built include an outer beltway and a major highway from Rockville to Laurel roughly following Routes 28 and 198.

Another feature of the plan is its insistence on the necessity of regional and interagency cooperation and planning.

Summary of Updated General Plan

December, 1969

All policy statements found anywhere in the General Plan and in any of the adopted area master plans were extracted and grouped under five headings, referred to as the "elements" of the General Plan. Under each heading the policy statements were classified as general goals to be accomplished, objectives leading to their accomplishment, or guidelines indicating specific courses of action. Those policy statements were then revised. According to the plan update, the most significant change since the General Plan preparation was faster-than-anticipated population and employment growth. The update also reflected changes in theory and practice that emphasized dynamic planning over static plans, the planning process over planning maps, and policy statements over geographical predetermination. New planning requirements incorporated into the update are staging of development and citizen participation.

Land Use

Goal - achieve a balance among the various land uses insofar as the proper amount, types, and distribution of each results in an environment and diversity of lifestyles that fulfills the requirements of the county residents.

Circulation

Goal - provide a balanced circulation system which most efficiently serves the economic, social, and environmental structure of the area.

Conservation

Goal - conserve valuable natural and historic areas for the benefit of present and future generations.

Environmental

Goal - provide an aesthetic and healthful environment for present and future generations.

Housing

Goal - stress the present quality and prestigious image of residential development in Montgomery County by further providing for a full range of housing choices, conveniently located in a suitable living environment, for all incomes, ages, and lifestyles.

Summary of General Plan Assessment Study

January 1987

This study assesses how well Montgomery County will function if it continues to develop or "build out" in accordance with the General Plan, as amended by master plans. The study starts by reviewing the basic concepts behind the General Plan and assessing their current validity. The study then looks at the current relationships between major tools that implement the concepts in the General Plan. The relationships are assessed in terms of three basic questions.

1. Will the County's current zoning result in more work trips than can be accommodated by the transportation network envisioned by the Master Plan of Highways?
2. Will the buildout of the current zoning result in more sewage and solid waste than can be accommodated by existing and planned treatment capacity?
3. Will the fiscal, economic, and social implications of the current zoning pattern satisfy the needs of the future?

The study's conclusions:

"The General Plan's basic concept appears sound, since it still appears to provide a better solution to increasingly critical transportation and environmental issues than a more sprawling development pattern would provide."

"While the basic concepts of the General Plan appear to be sound, the zoning and transportation infrastructure patterns that implement it may need adjustment to insure adequate long-term transportation capacity." When the total amount of growth allowed by current zoning was compared with full development of presently-planned transportation facilities, the resulting traffic congestion was intolerable. A second test using reduced commercial development and adding transit services resulted in traffic congestion that was still heavy, but tolerable.

"While the basic concepts of the General Plan appear to be sound, the zoning and waste disposal infrastructure patterns that implement it may need adjustment to insure adequate long term public health safety." Estimates of demand for sewer capacity suggest that substantial additional sewer capacity will be needed prior to buildout.

"While the basic concepts of the General Plan appear to be sound, the zoning and general public services infrastructure may need adjustment to insure adequate long-term fiscal, economic, and social balance." Current zoning, if built out, will result in a J/H ratio much higher than today's, although research suggests that the J/H ratio for suburban counties appears to be self-limiting to below 2.0. A significantly higher J/H ratio than the current 1.6 would have serious implications for housing supply and costs, tax revenue, transportation, and other social and economic factors.

"A Comprehensive Growth Policy study should be undertaken to provide a reference framework for insuring that both long-range master plans and the Annual Growth Policy remain consistent with the basic concepts of the General Plan."

Summary of Envisioning Our Future

**The Report of the Commission on the Future of Montgomery County, Maryland
June 1988**

Purpose: to identify key trends and highlight critical and emerging challenges likely to shape the County's future and make recommendations

Four major themes emerged: foster a greater sense of community; manage growth at a moderate level, demographic changes have a profound implication for the county's future, and our children need a strong preparation to meet the future.

Planning for Orderly Growth

- Reassess the General Plan, replanning the two corridors and maintaining the Agricultural Reserve.
- Encourage steady growth of selected new jobs at about half the recent rate.
- Increase housing production by 50%.
- Restrict low-density employment and require convenience commercial uses in all major employment centers.
- Develop a comprehensive, functional transportation plan with neighborhood jitneys and a free bus service.

Neighborhoods

- Explore locally-elected neighborhood councils.
- Permit home occupations and small businesses.
- Encourage the creations of magnet centers that can be operated and used by neighborhoods.
- Appoint an ombudsman for neighborhood issues.
- Encourage County government to work with neighborhoods on public transportation issues.
- Ensure that it is possible to travel by foot or bicycle within neighborhoods.

Housing

- Strengthen implementation of the County's housing policy that anyone has the opportunity to live anywhere in the County.
- Provide incentives to encourage the construction of housing near Metro stops.
- Increase low- and moderate-income housing.
- Build more urban-like neighborhoods with closely-knit housing balanced with amenities.

Human Services and Child Care

- Make available before- and after-school programs, with transportation for after-school programs and recreation activities.
- Plan County facilities to include joint use by children and senior citizens and develop intergenerational programs.

Education

- Improve the curriculum and the educational process by involving parents and the private sector, giving teachers and principals greater latitude on curriculum and resource allocation, keeping current with modern technology, and experimenting with new ideas and programs.

- Promote greater fiscal accountability from the Board of Education.
- Make provisions for a longer school year.
- Coordinate all higher education in the County.
- Work to ensure strong state support of community colleges, including sufficient funding for Montgomery College.

Environment and Health

- Explore every possible way of reducing the amount of garbage that must be disposed of.
- Require gasoline stations to install gas vapor recovery devices at the pump and adopt more stringent emissions standards for all vehicles.
- Consider radon inspections at the time of sale of a home.
- Expand the role of County government as a protector of the health of its citizens.

Quality of Life

- Reaffirm its commitment to the park system, ensure open spaces in urban areas, and continue to protect and acquire stream valleys to form connecting greenways.
- Enact a County-wide tree protection ordinance.
- Maintain close-to-home recreation opportunities by requiring park or open space as a part of any new or redeveloped residential area over a certain size.
- Develop a coordinated public policy for recreation and cultural facilities and programs and consolidate management of all County public recreation programs and resources.

Government and Finance

- Explore various options for increased sources of revenue.
- Maintain good management practices.
- Expand cooperative links with neighboring jurisdictions.
- Plan, in a systematic and orderly way, for the future.

Summary of Comprehensive Growth Policy Study

August 1989

The four volumes of the CGPS contain a technical analysis of current trends and forces that affect current growth. They also suggest some possible directions for a policy response.

Volume 1, *A Policy Vision*, summarizes the major conclusions of the study. It discusses the topics of congestion, affordability, policy making, and the management system. Volume 2, *Alternative Scenarios*, describes in detail how a number of alternative future growth scenarios were evaluated and contains considerable information about the feasibility and cost of alternative transportation systems. Volume 3, *Global Factors*, summarizes the views of a number of experts with regard to trends and forces at work in the world at large which could have a significant effect on Montgomery County in the future. Volume 4, *Appendices*, contains a variety of supporting information that is referenced in the other volumes.

The CGPS addresses four basic questions:

1. Can we grow without excessive congestion?

Yes, but only under certain conditions.

Basically, the number of cars on the roads must be managed (e.g., set a goal of reducing the average auto driver share of work trips from 75 to 50 percent).

To accomplish such a goal, we would need to:

- introduce new travel networks (e.g., trolley, van, and hiker/biker trails),
- cluster land uses at points along these networks (e.g., urban village centers), and
- take actions to help people break the car habit (e.g., auto/ transit pricing and pedestrian friendly design).

2. Can we afford the cost of growth?

Probably, but only under certain conditions.

Primarily, some funding patterns need to shift from the private sector to the public sector (i.e., reduce private sector expenditure on automobiles and increase public sector revenue for transportation). Some ways to help this happen could be to:

- tax the use of the private automobile (gas tax, parking fees, etc.), and
- obtain more direct state road and rail construction.

3. How should be approach these problems?

The growth management problem is nationwide, even worldwide. Primarily, the challenge is how to control urban sprawl and contain the environmental, economic, and social costs it engenders.

Montgomery County has accomplished more in this regard than most of the suburban jurisdictions in the nations. The preservation of open space under the "Wedges and Corridors" plan has been a significant achievement over the past 25 years. Today, an additional challenge faces us in terms of travel behavior. The County's Commission on the Future has pointed the way. Without

losing sight of "Wedges and Corridors," we should consider shifting our focus towards a vision called "Centers and Trails."

4. Are the present management tools adequate?

No, some refinements should be considered.

For the long run, the most important would appear to be the establishment of appropriate state and local regional growth management agreements and mechanisms.

But also, within Montgomery County, the following could be candidates for further exploration and action over the next several years:

- a new Travel Network plan (to preserve rights-of-way for trolley, van, and hiker/biker trails,
- establishment of adequate local transportation revenue sources (e.g., local piggyback on state gas tax),
- revision of master plans and zoning over time to further reduce sprawl and increase strategic concentration (urban village centers),
- incorporation of transit/pedestrian-friendly design principles into the subdivision and site plan review process,
- resolution of legal issues regarding how to enforce staging limits that are defensible at court (Adequate Public Facility Test at Subdivision versus at Zoning), and
- expansion of research into: the economic and fiscal forces that affect housing prices, and policies to address the affordability issue.

Summary of Action Agenda Growth Management Advisory Work Group 1991

The Action Agenda was prepared by the Growth Management Advisory Work Group. The 15 member Growth Management Advisory Group was formed to examine the process of managing growth in Montgomery County and the relationship between the factors regarding growth and the planning process. The Action Agenda was written to provide guidance to the Montgomery County Planning Board in the formulation of its long-range work program.

The recommendations of the Work Group are categorized into six areas: the framework for growth, the community, components of growth, constraints to growth, the economics of growth and growth management tools.

Transit recommendations of the Action Agenda are found primarily in the section entitled "Constraints to Growth" and are as follows:

- Continue to reassess the adequacy, compatibility, and effects of the planned transportation network, including both roads and transit.
- Study additional and creative ways to reduce traffic in different types of planning areas. Evaluate the degree to which transportation demand management can reduce congestion and increase cost-effectiveness of all types of transportation.
- Identify, reserve and establish priorities for funding new rights-of-way for highways, transitways, high-occupancy vehicle facilities, and other public rights-of-way in advance of development.
- Study changing travel patterns and travel behavior to determine 1) the portion of congestion due to population growth and the portion due to changing behavior and travel preferences, and 2) how land use and transportation planning decisions are affected by changing travel patterns.
- Develop a better understanding of people's real preferences with regard to transit alternatives to assist in deciding the types of transportation facilities that should be built and where.

Summary of I-270 Corridor Cities Transit Easement Study

March, 1990

The Montgomery County Master Plan of Highways and related master plans identify a transit easement for public use from the Shady Grove Metrorail station north through Gaithersburg and Germantown to Clarksburg. The Corridor Cities Transit Easement Study is part of a comprehensive effort to reevaluate the location of this easement.

Three alternative transit alignments, of an initial eight alignments, became the focus of evaluation. They were found to offer the greatest potential benefits, from a variety of perspectives including development costs and land use planning opportunities, for a transit easement(s) in the I-270 corridor north of Shady Grove Metro. The three potential easements are:

A. Alternative 1

This alignment uses the CSX right-of-way between Shady Grove and Metropolitan Grove and the west side of I-270 to reach Germantown. It then crosses over I-270 north of the proposed Germantown Town Center and continues to Clarksburg in new right-of-way between I-270 and MD 355. The alignment's terminus is about one mile north of MD 121 (Clarksburg Road) between MD 355 and I-270.

B. Alternative 3

This potential busway easement was originally proposed to use I-370 and expanded rights-of-way of I-270 for most of its alignment between Shady Grove and Clarksburg. A preliminary engineering assessment of the feasibility of expanding the I-270 right-of-way just north of the I-370 interchange conducted during Phase III of the I-270 Corridor Cities Transit Easement Study concluded, however, that locating an exclusive busway in the area was possibly impractical and too costly. The busway alignment between Shady Grove Metro and Metropolitan Grove has, as a result, been subsequently modified in its southern segments to follow the alignment of Alternative 1 from Shady Grove to Metropolitan Grove, or as a second option, the Alternative 8 alignment through west Gaithersburg.

Between Metropolitan Grove and Germantown, the busway is proposed to follow the I-270 along the west side of the right-of-way at least to Middlebrook Road. In the Germantown area, the busway includes the option of departing from I-270 and following the alignments for Alternatives 1 and 8 through the Germantown office district. North of Germantown the route crosses I-270 to run either along the east side of the freeway or in the unused freeway median to a terminus approximately one mile north of MD 121.

C. Alternative 8

The alignment of this potential easement runs through undeveloped land west of the Shady Grove Metro Station, through the Shady Grove Master Plan Area and then runs parallel to Great Seneca Highway to the southwest boundary of the National Institute of Standards and Technology. It turns northeast, running parallel to Quince Orchard Road to the CSX right-of-way and Metropolitan Grove MARC station, just east of Clopper Road. North of Metropolitan Grove the easement is located as described for Alternative 1.

A second easement through Germantown on the east side of I-270 is optional. The east side easement, in addition to the west side easement for Alternatives 1, 3 and 8, was recently designated in the Germantown Master Plan.

Summary of Transportation Network Studies - Phase I

October, 1992

This report documents the analysis and results of Phase I of the Transportation Network Studies conducted by the Montgomery County Planning Department during 1990 and 1991. The Transportation Network Studies (TNS) project identified general rights-of-way that are most appropriate for detailed evaluation for future use as transportation corridors served exclusively by transit or HOV vehicles and provided back up information on travel changes, and other actions to support the transitway recommendations.

General alignments were identified for a network totaling approximately 75 miles, primarily along existing roadway alignments in southeastern Montgomery County. The study recommended that, based on detailed evaluation, elements of this network of alignments should be preserved through the master planning process.

Preservation of general rights-of-way for transitways or HOV priority lanes are recommended along the following roadways within the study area.

- I-270, between I-495 and Shady Grove
- I-495, between Fairfax and Prince George's Counties
- US 29, between Silver Spring and Howard Counties
- Georgia Avenue, between Glenmont and Olney
- Veirs Mill Road, between the Montrose Parkway and University Boulevard
- University Boulevard, between Veirs Mill Road and Prince George's County
- Randolph Road, between Veirs Mill Road and Glenallen Road

Preservation of general rights-of-way are also recommended for three alignments not currently used for transportation, including:

- the alignment of the Montrose Parkway, (in the previous Rockville Facility alignment), I-270 and Veirs Mill Road;
- an alignment connecting Montgomery Mall to the Shady Grove planning area along the PEPCO power line easement and land adjacent to the proposed extension of Shady Grove Road; and
- an alignment connecting the Randolph Road transitway to US 29 at Fairland (south of Randolph Road) via the perimeter of parks and schoolyards.

Summary of The General Plan Refinement Of the Goals and Objectives for Montgomery County

The 1993 *General Plan Refinement of the Goals and Objectives for Montgomery County* amends the *General Plan for the Physical Development of the Maryland-Washington Regional District in Montgomery and Prince George's Counties (1964)*, as amended, and the 1969 *Updated General Plan for Montgomery County* (approved in 1970), as amended. The General Plan Refinement provides the basis for more specific area master plans, functional plans, and sector plans. It's purpose is to provide clear guidance regarding the general pattern of development in Montgomery County, while retaining enough flexibility to respond to unforeseeable circumstances as they arise.

The General Plan Refinement divides Montgomery County into four geographic components: the Urban Ring, the Corridor, the Suburban Communities, and the Wedge. Each area is defined in terms of appropriate land uses, scale, intensity, and function. The geographic components provide a vision for the future while acknowledging the modifications to the Wedges and Corridors concept that have evolved during the past three decades. In particular, they confirm two distinct sub-areas of the Wedge - an Agricultural Wedge and a Residential Wedge. They also recognize the transitional areas of generally moderate density and suburban character that have evolved between the Wedge, Corridor, and Urban Ring as Suburban Communities. Emphasis remains on intensification of the Corridor, particularly along the main stem.

In addition to defining geographic components, the General Plan Refinement provides seven goals and associated objectives and strategies that give guidance to development within those components. The goals, objectives, and strategies provide a future vision for Montgomery County and establish a frame of reference for decision-making to make that vision become a reality. The seven goals are as follows:

Land Use

Achieve a variety of land uses and development densities consistent with the Wedges and Corridors pattern.

Housing

Encourage and maintain a wide choice of housing types and neighborhoods for people of all incomes, ages, lifestyles, and physical capabilities at appropriate densities and locations.

Economic Activity

Promote a healthy economy, including a broad range of business, service, and employment opportunities at appropriate locations.

Transportation

Provide a safe and efficient transportation system that serves the environmental, economic, social, and land use needs of the County and provides a framework for development.

Environment

Conserve and protect natural resources to provide a healthy and beautiful environment for present and future generations. Manage the impacts of human activity on our natural resources in a balanced manner to sustain human, plant, and animal life.

Community Identity and Design

Provide for attractive land uses that encourage opportunity for social interaction and promote community identity.

Regionalism

Promote regional cooperation and solutions of mutual concern to Montgomery County, its neighbors, and internal municipalities.

APPENDIX D

*DESCRIPTION
OF
THE
BACKGROUND
TRANSPORTATION
SYSTEM*

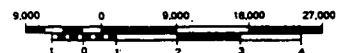




METRORAIL FACILITIES

	Existing	Planned	Proposed
METRORAIL			
MARC AND VIRGINIA RAIL EXPRESS			
TRANSITWAY			
CSXT AND AMTRAK			
HOV LANES			

NORTH



TRANSITWAY AND HOV NETWORK MASTER PLAN

The Maryland-National Capital Park and Planning Commission

DESCRIPTION OF THE BACKGROUND TRANSPORTATION SYSTEM

The following transportation facilities and services will be included in the background transportation system for each alternative to be evaluated in the development of the Master Plan.

1. Pedestrian and Bicycle Facilities

The existing and master planned pedestrian and bicycle facilities are included in the background transportation network. They are shown on the 1978 Master Plan of Bikeways and on the individual master plans. The background transportation system will also include the trails shown in the 1991 "Guide To Trails" published by The Maryland-National Capital Park and Planning Commission.

2. Roadways

The existing and master planned highways and roadways are included in the background transportation network. They are shown on the 1992 Master Plan of Highways.

3. Existing and Programmed Transit and HOV Facilities

a. Transit Facilities

1. Metrorail (Map D-1)

The full 103-mile Metrorail system will be a key part of the future network. Two branches of the Metro Red Line serve Montgomery County. The eastern branch extends north up Georgia Avenue to Wheaton, with a programmed extension to the Glenmont station and storage yard. The other branch extends north parallel to Rockville Pike (MD 355) to the Shady Grove station and service and inspection yard. This service provides connections to the District of Columbia and the rest of the Metrorail network. There are 11 Metrorail stations in Montgomery County. Two of these Metrorail stations provide connections to MARC commuter rail service.

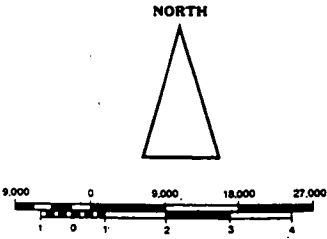
2. MARC Commuter Rail (Map D-2)

Montgomery County is served by the Brunswick Line of the Maryland Commuter Rail Service operated by the State Department of Transportation. This line connects Union Station in Washington, D.C. with Martinsburg, West Virginia. The MARC service on the Brunswick Line is designed to provide peak direction service for commuters. There are currently six trains in each peak period which serve the 11 stations in Montgomery County.



COMMUTER RAIL FACILITIES

	Existing	Planned	Proposed
METRORAIL			
MARC AND VIRGINIA RAIL EXPRESS			
TRANSITWAY			
CSXT AND AMTRAK			
HOV LANES			



TRANSITWAY AND HOV NETWORK MASTER PLAN

The Maryland-National Capital Park and Planning Commission

Additional service is programmed which will connect Frederick City to the Brunswick line via Point of Rocks. Service improvements, including increased frequencies and trains in the reverse direction of the peak, are programmed for the Brunswick Line.

3. Bus Service (Map D-3)

Public bus transit service in Montgomery County is provided by Metrobus and Montgomery County Ride-On service. In addition, commuter bus service is provided by private operators. There are 2 Mass Transit Administration (MTA), 23 Metrobus, and 66 Ride-On routes in Montgomery County that serve over 111,000 passengers per day.

4. Transit Centers and Park-and-Ride Lots (Map D-4)

Transit centers are designed to provide convenient points where bus patrons can transfer from one route to another or from one mode of travel to another. There are ten park-and-ride lots provided by Montgomery County Department of Transportation, two of which are at transit centers. The existing transit centers are located at the 13 Metrorail stations and at Montgomery Mall and Lakeforest Mall. Other park-and-ride lots are located adjacent to transportation corridors to provide easy access for commuters.

c. HOV Facilities (Map D-5)

1. US 29

There are directional peak-period bus lanes on the shoulders of US 29 between Burtonsville (MD 198) and Industrial Parkway (south of Randolph Road).

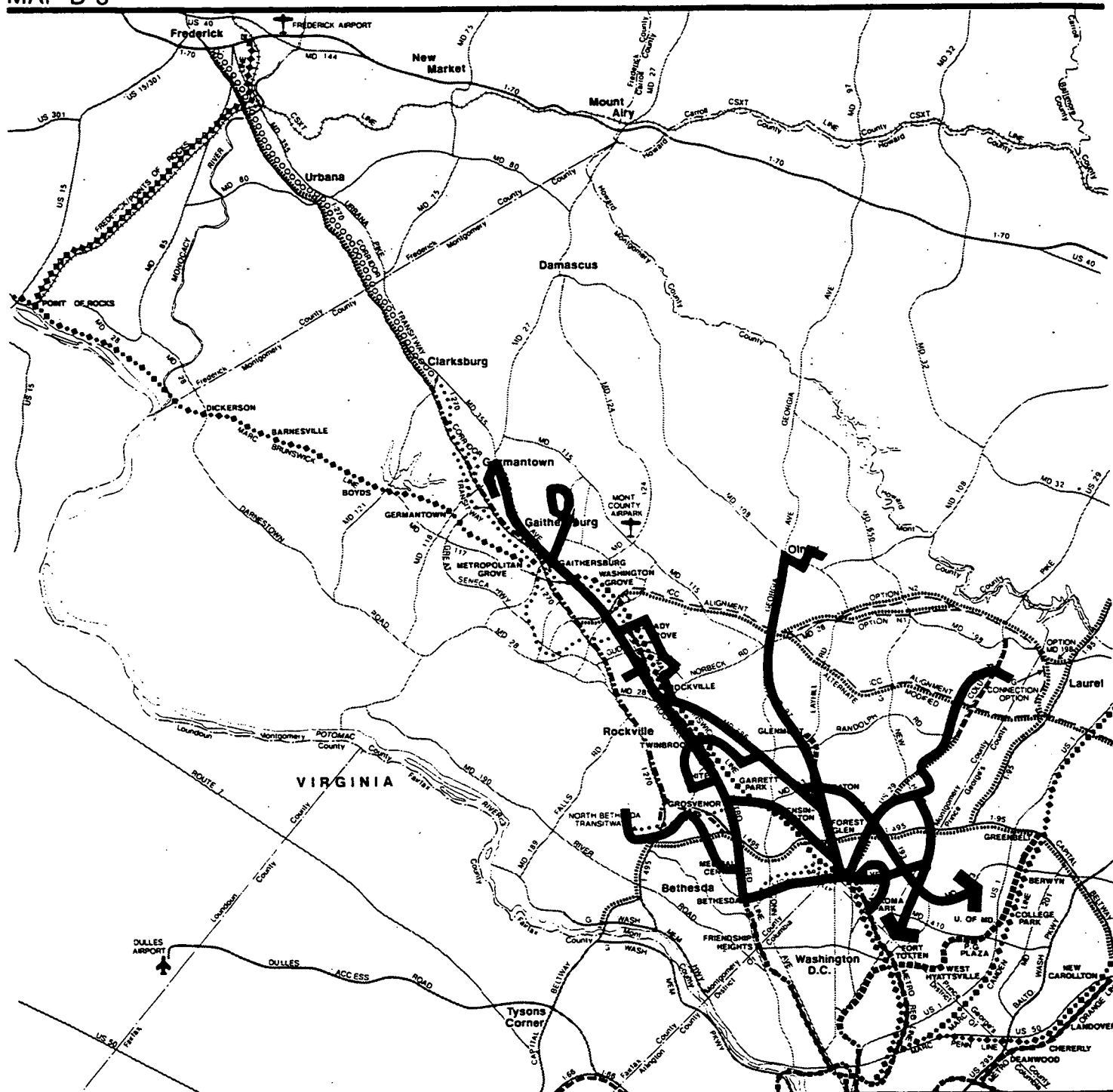
2. I-270

When I-270 was widened in the late 1980's, the inside lane in each direction, from the I-270 Split north to MD 118, was designated as a future HOV lane. Traffic will be restricted to HOV use when the volume of traffic on I-270 is sufficient to warrant the change.

4. Ongoing Studies

a. I-495/I-95 (Washington Beltway) - The Maryland State Highway Administration has initiated a project planning study to determine the feasibility of an HOV facility on the Washington Beltway.

b. Intercounty Connector (ICC) - This is a major transportation facility which is proposed to connect I-270 and US 301 in Prince George's County. The portion between I-270 and



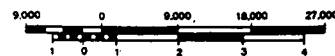
MAJOR COUNTY-WIDE BUS ROUTES

	Existing	Planned	Proposed
METRORAIL	=====	=====	=====
MARC AND VIRGINIA RAIL EXPRESS
TRANSITWAY
CSXT AND AMTRAK	-----	-----	-----
HOV LANES	-----	-----	-----

ROUTES WITH 2000 OR MORE PASSENGERS DAILY

Source: Division of Transit Services, MCDOT

NORTH



TRANSITWAY AND HOV NETWORK MASTER PLAN

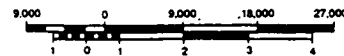
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TRANSIT CENTERS AND PARK-AND-RIDE LOTS

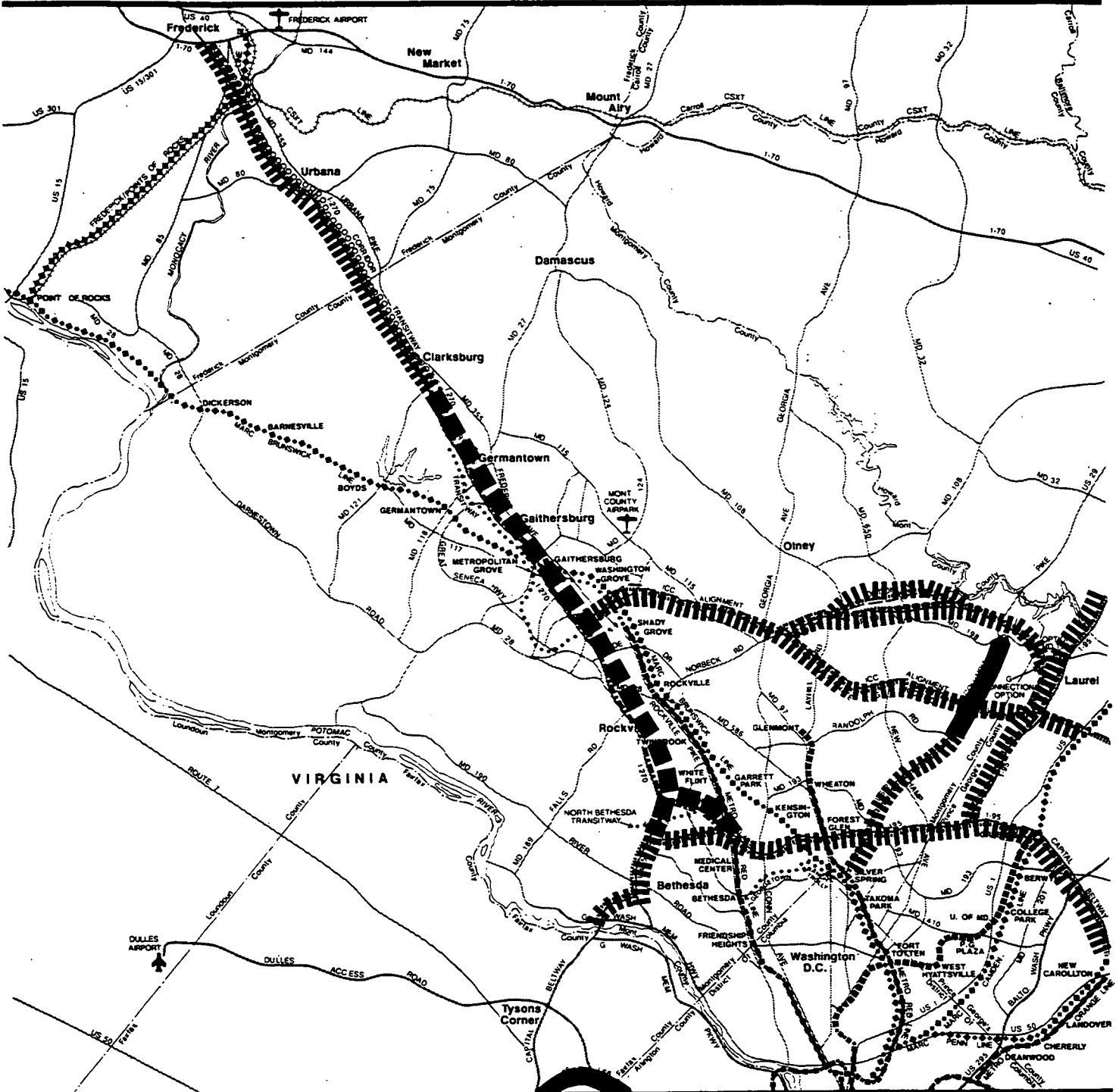
	Existing	Planned	Proposed
METRORAIL	=====	=====	=====
MARC AND VIRGINIA RAIL EXPRESS
TRANSITWAY
CSXT AND AMTRAK	-----	-----	-----
HOV LANES	-----	-----	-----

TRANSIT CENTERS ★
PARK-AND-RIDE LOTS ★



TRANSITWAY AND HOV NETWORK MASTER PLAN

The Maryland-National Capital Park and Planning Commission

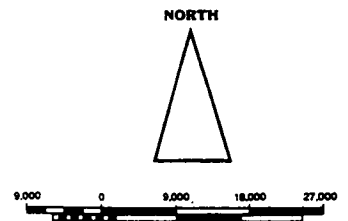


HOV FACILITIES

	Existing	Planned	Proposed
METRORAIL	=====	=====	=====
MARC AND VIRGINIA RAIL EXPRESS
TRANSITWAY
CSXT AND AMTRAK	-----	-----	-----
HOV LANES	=====	=====	=====

NETWORK OF ALIGNMENT CORRIDORS

TRANSITWAY AND HOV NETWORK MASTER PLAN



The Maryland-National Capital Park and Planning Commission

US 1 is currently the subject of an environmental impact statement as part of a project planning study by the Maryland Department of Transportation. The alternative alignments will include consideration of a transitway and HOV priority lane.

c. I-270 Multi-Modal Study - The Maryland State Highway Administration is conducting a multi-modal project planning study along I-270 from the Shady Grove Metro station to US 15, north of Frederick City. Four alternatives are being considered:

- light rail transit service in the I-270 Transitway alignment,
- a busway in the I-270 Transitway alignment,
- HOV priority lanes in I-270 and
- Transit System Management (TSM) with no transportation improvements beyond those in the current master plans and without the I-270 Transitway.

5. Transit and HOV Facilities Included in Approved Master Plans

a. Transit Facilities (Map D-6)

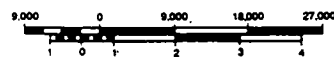
1. I-270 Corridor Cities Transitway

The I-270 Corridor Cities Transitway extends generally north from the Shady Grove Metro station to Clarksburg and on to Frederick. There are three alternative alignments between Shady Grove and the Metropolitan Grove MARC station. One uses the alignment of I-370 and I-270. Another follows the CSX railroad tracks to the Metropolitan Grove MARC station. From there, the alignment parallels I-270 across Seneca State Park to Germantown. Within Germantown there are two alignments to serve the Employment Corridor. The alignment extends north on the east side of I-270 through Clarksburg. The third alternative alignment heads west to the Shady Grove area and then follows Great Seneca Highway to Quince Orchard Road, which it then follows to Metropolitan Grove. From there, it uses the same route as the second alignment.

Currently, only the Germantown and Shady Grove Master Plans include the alignments. The Clarksburg Master Plan is scheduled for adoption in early 1993 and includes these alignments.

Portions of the alignments of the I-270 Corridor Cities Transitway are in the City of Gaithersburg and in the City of Rockville, which is in the process of annexing property that

	Existing	Planned	Proposed
METRORAIL			
MARC AND VIRGINIA RAIL EXPRESS			
TRANSITWAY			
CSXT AND AMTRAK			
HOV LANES			



**The Maryland-National Capital
Park and Planning Commission**

includes a section of the proposed right-of-way. The cooperation and approval of these municipalities are needed to protect the alignment.

The alignment from Clarksburg to Frederick was determined through a subsequent study by Frederick County. This portion is being added to the area master plans as they are amended.

Within Montgomery County, the alignments are included in the Shady Grove Area, Gaithersburg Vicinity, Germantown and Clarksburg Master Plans. The City of Gaithersburg intends to add the alignments as part of its adoption of the Transportation Element of its master plan.

Within the Shady Grove Area, there is a transitway loop serving from the Corridor Cities Transitway serving the medical center. A transit connection to the south via MD 28 is also indicated on that master plan.

2. Georgetown Branch Light Rail Transitway

The Georgetown Branch Light Rail Transitway (trolley) will connect the Silver Spring Metrorail station with the Bethesda Metrorail station. It uses an abandoned railroad right-of-way.

3. Grosvenor Transitway

This transitway connects the Grosvenor Metrorail station with Montgomery Mall. This facility is recommended in the recently approved North Bethesda-Garrett Park Master Plan.

b. HOV Facilities (Map D-5)

Only one of the approved area master plans includes HOV facilities among the transportation facilities needed to serve the land use and zoning recommendations of the Master Plan. That master plan is the North Bethesda-Garrett Park Master Plan, which recognizes HOV lanes as being planned by SHA on the east and west spurs.

6. Regional Facilities

The chart on the following page lists significant improvements to regional facilities that will be among those included in the background transportation system for the Transitway and HOV Network Master Plan. Programmed improvements to transit service on existing alignments will be included in the background transportation network. The background network will also include those facilities identified by the Metropolitan Washington Council of Governments (MWCOC), which define its Proposed for Testing-2 (PFT-2) network. The PFT-2 network consists of a set of existing and proposed transit oriented

facilities that are to be tested by WMCOG in the development of its Long Range Plan (LRP).

REGIONAL FACILITIES

Highways - Based on the Metropolitan Washington Council of Governments Transportation Planning Program

- Widening of the Capital Beltway between US 50 and I-95 in Prince George's County
- The Intercounty Connector
- Widening of MD 201 (Kenilworth Avenue) from I-95 to I-495 Capital Beltway
- Widening of US 50 (John Hanson Highway) from MD 410 Extended to Patuxent River
- Extending MD 410 from the Baltimore-Washington Parkway to US 50
- Widening of MD 214 (Central Avenue) from I-95 to US 301
- Widening of MD 4 (Pennsylvania Avenue) from US 301 to I-95/I-495 Capital Beltway
- Widening of MD 5 (Branch Avenue) from US 301 to I-95/I-495 Capital Beltway
- Widening of MD 210 (Indian Head Highway) from MD 225 to I-95/I-495 Capital Beltway
- Widening of Dulles Airport Access Toll Road in Fairfax County
- Widening of I-66 in Fairfax County

HOV Priority Lanes - Based on Maryland's proposed state-wide HOV network

- I-95 from MD 24 to I-695
- I-83 from Belfast to I-695
- I-695 from I-97 to I-95 North of Baltimore
- I-70 from I-695 to US 40
- I-95 from I-695 to I-495
- US 29 from Silver Spring to MD 198
- I-270 from I-70 to I-495
- I-495 from Woodrow Wilson Bridge to Cabin John Bridge
- I-97 from I-695 to US 50/301
- US 50/301 from MD 70- I-95
- MD 4 from I-95 to US 301
- MD 5 from I-95 to US 301
- MD 210 from I-95 to MD 373
- Intercounty Connector from I-270 to US 1

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